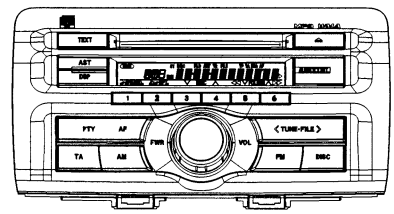
Pioneer

Service Manual

DAIHATSU



DEH-M3067ZY/XU/EW

ORDER NO.
CRT3790

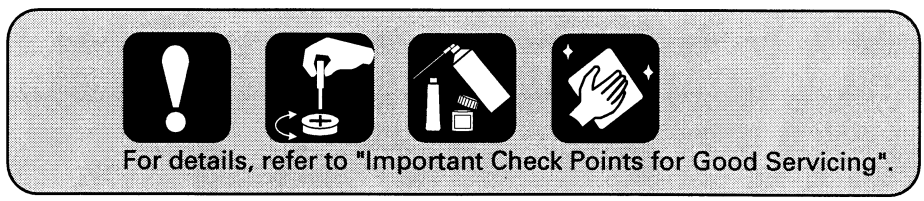
COMBINATION CAR STEREO

DEH-M3067ZY/XU/EW

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3158	CRT3394	S10.1AAC	CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly

VEHICLE	DESTINATION	PRODUCED AFTER	OEM PARTS No.	ID No.	PIONEER MODEL No.
COO	EUROPE	October 2006	86180-B1080-B0	-----	DEH-M3067ZY/XU/EW



PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
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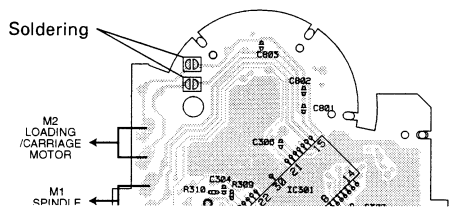
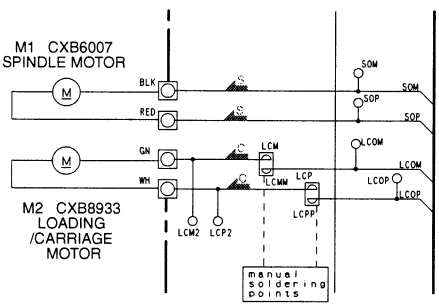
SAFETY INFORMATION

● Service Precaution

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.
5. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
6. When this CD core unit is replaced, solder the land at LCM-LCMM and LCP-LCPP beforehand.





This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

● **Safety Precautions for those who Service this Unit.**

- **When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

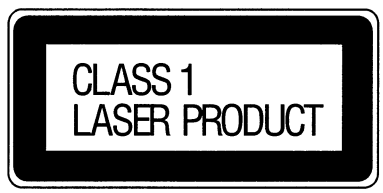
1. **During repair or tests, minimum distance of 13 cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION
This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

The following caution label appears on your unit.

Location: on the bottom of the unit



WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics
Wave length : 785 to 814 nm
Maximum output : 0.25 mW(Emitting period : unlimited)

Additional Laser Caution

Transistors Q101 in PCB drive the laser diodes.
When Q101 is shorted between their terminals, the laser diodes will radiate beam.
If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

General

Power source.....13.2 V DC(10.5 V to 16.0 V allowable)
Grounding system.....Negative type
Backup current.....0.30 mA or less
Weight.....2 265 g

CD player

Signal format.....Sampling frequency : 44.1 kHz
Number of quantization bits : 16;linear
System.....Compact disc audio system
Usable discs.....Compact disc
Distortion.....0.3 % or less
S/N.....65 dB or more
Separation.....60 dB or more
Stereo balance.....1.5 dB with in

FM tuner

Frequency range.....87.5 MHz to 108.0 MHz
S/N.....46 dB or more
Distortion.....1.5 % or less
Image interference.....35 dB or more
IF interference.....64 dB or more
Stereo separation.....25 dB or more(1 kHz)

MW tuner

Frequency range.....522 kHz to 1 611 kHz
S/N.....42 dB or more
Distortion.....1.5 % or less
IF interference.....40 dB or more
Image interference.....45 dB or more

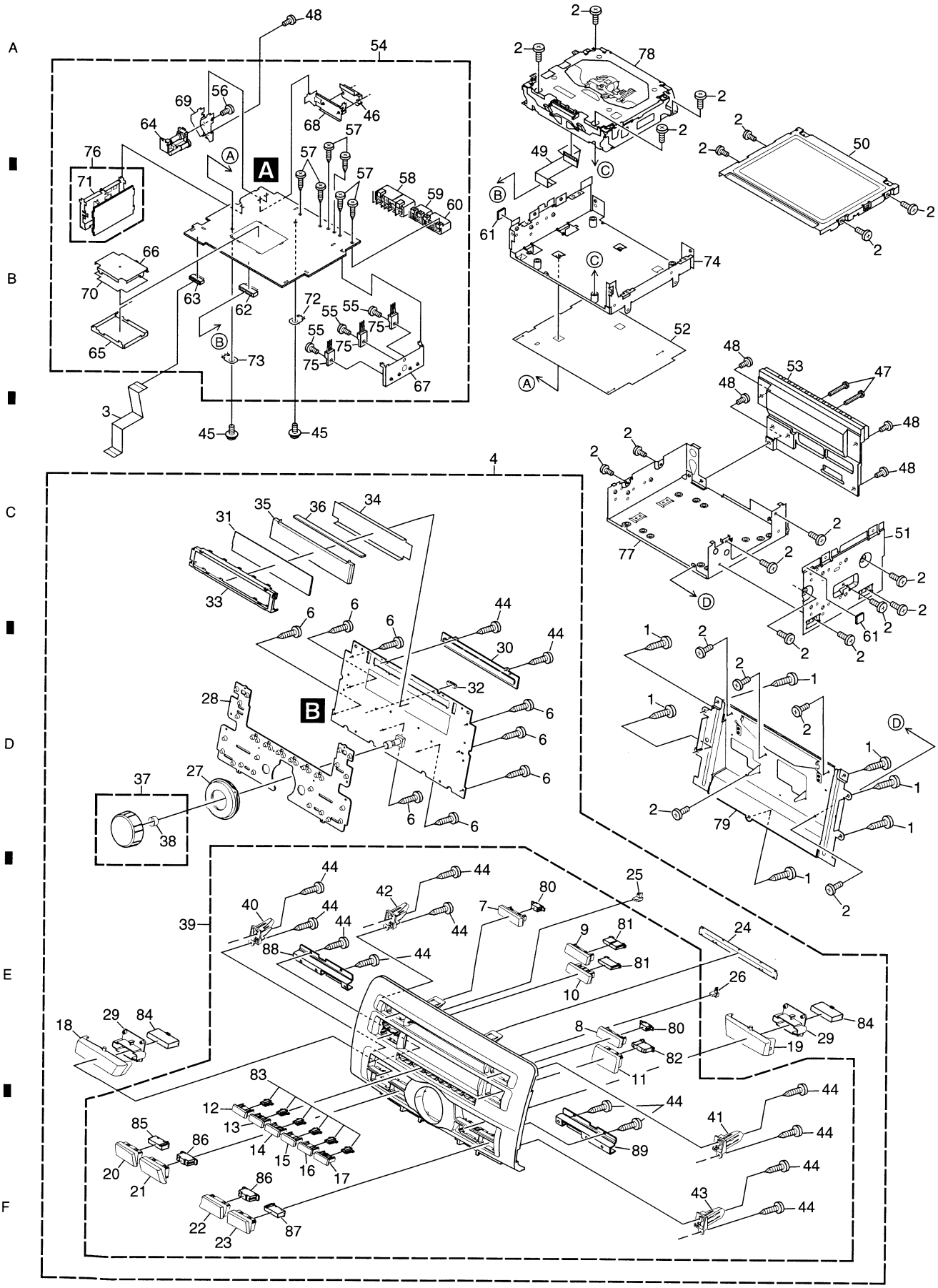
LW tuner

Frequency range.....153 kHz to 279 kHz
S/N.....42 dB or more
Distortion.....1.5 % or less
IF interference.....40 dB or more
Image interference.....45 dB or more

2. EXPLODED VIEWS AND PARTS LIST

NOTES : • *Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *Screw adjacent to ▽ mark on the product are used for disassembly.*
• *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

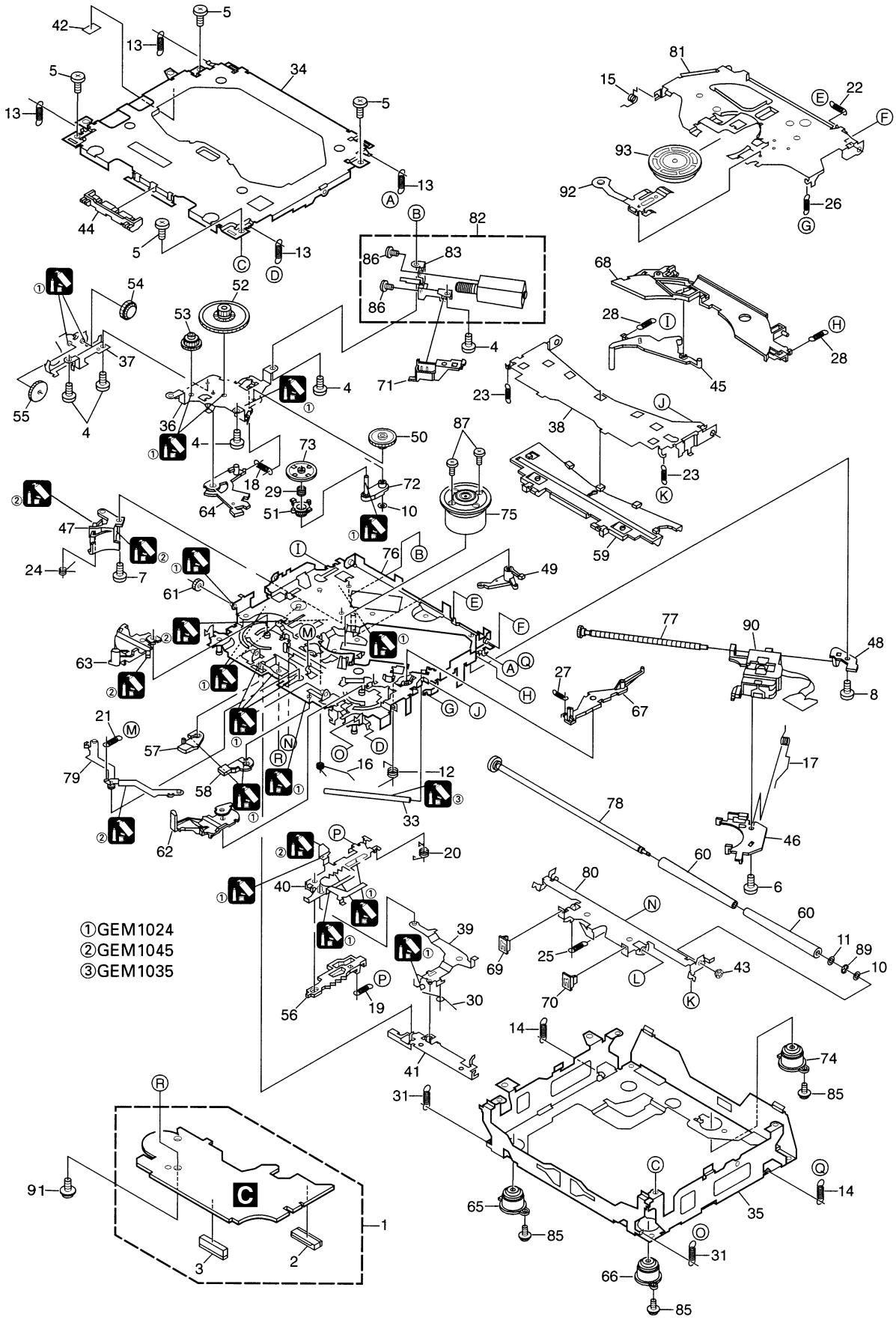
2.1 EXTERIOR



EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BPZ30P100FTC
	2	Screw	BSZ26P040FTC
	3	Connector	CDE8060
	4	Grille Assy	CXC7283
	5	•••••	
	6	Screw	BPZ20P080FTC
	7	Button(TEXT)	CAC9902
	8	Button(EJECT)	CAC9903
	9	Button(AST)	CAC9904
	10	Button(DSP)	CAC9905
	11	Button(AUDIO CONT)	CAC9906
	12	Button(1)	CAC9907
	13	Button(2)	CAC9908
	14	Button(3)	CAC9909
	15	Button(4)	CAC9910
	16	Button(5)	CAC9911
	17	Button(6)	CAC9912
	18	Button(PTY/AF)	CAC9913
	19	Button(TUNE/FILE)	CAC9914
	20	Button(TA)	CAC9915
	21	Button(AM)	CAC9916
	22	Button(FM)	CAC9917
	23	Button(DISC)	CAC9918
	24	Cover	CNN1230
	25	Lighting Conductor	CNV8855
	26	Lighting Conductor	CNV8856
	27	Lighting Conductor	CNV8858
	28	Rubber	CNV9489
	29	Holder	CNV8860
	30	Guide	CNV8861
	31	LCD	CAW1943
	32	Connector(CN901)	CKS5067
	33	Holder	CND3137
	34	Sheet	CNM9926
	35	Lighting Conductor	CNV8857
	36	Connector	CNV8862
	37	Knob Unit	CXC7043
	38	Spring	CBL1711
	39	Grille Assy	CXC7281
	40	Holder	CNV8989
	41	Holder	CNV8990
	42	Holder	CNV8991
	43	Holder	CNV8992
	44	Screw	IPS20P080FTC
	45	Screw	ISS26P055FTC
	46	IC(IC801)	TDA7386
	47	Screw	BSZ26P160FTC
	48	Screw	BSZ30P060FTC
	49	Connector	CDE8039
	50	Upper Case	CNB3307
	51	Side Panel	CNB3308
	52	Insulator	CNM9686
	53	Heat Sink	CNR1777
	54	Tuner Amp Assy	CWN2097
	55	Screw	ASZ26P060FTC
	56	Screw	BMZ30P040FTC
	57	Screw(M3x6)	CBA1393
	58	Connector(CN471)	CKM1458
	59	Connector(CN473)	CKM1466
	60	Connector(CN472)	CKM1467
	61	Spacer	CNN1295
	62	Connector(CN602)	CKS3886
	63	Connector(CN601)	CKS4376
	64	Connector(CN501)	CKX1064
	65	Shield	CND2489
	66	Shield	CND2490
	67	Holder	CND2491
	68	Holder	CND2492
	69	Holder	CND2503
	70	Insulator	CNM9688
	71	Holder	CND2144
	72	Terminal(CN474)	VNF1084
	73	Terminal(CN475)	VNF1084
	74	Chassis Unit	CXC6470
	75	Transistor(Q431,441,851)	2SB1185
	76	FM/AM Tuner Unit	CWE1832
	77	Chassis Unit	CXC6602
	78	CD Mechanism Module(S10WMA-T2)	CXK5684
	79	Frame Unit	CXC5687
	80	Lighting Conductor	CNV9169
	81	Lighting Conductor	CNV9170
	82	Lighting Conductor	CNV9171
	83	Lighting Conductor	CNV9172
	84	Lighting Conductor	CNV9173
	85	Lighting Conductor	CNV9178
	86	Lighting Conductor	CNV9175
	87	Lighting Conductor	CNV9174
*	88	Holder	CNV8993
*	89	Holder	CNV8994

2.2 CD MECHANISM MODULE

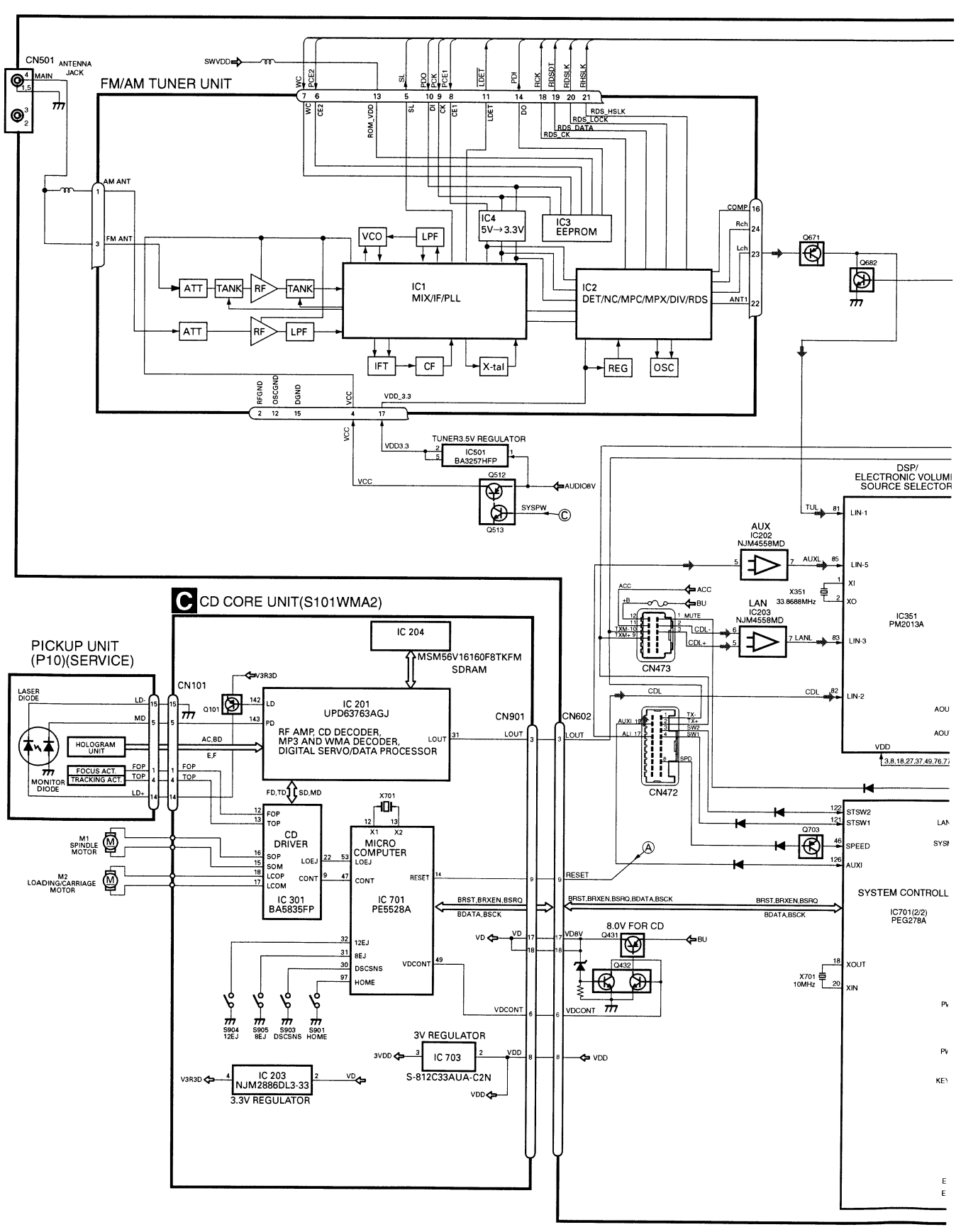


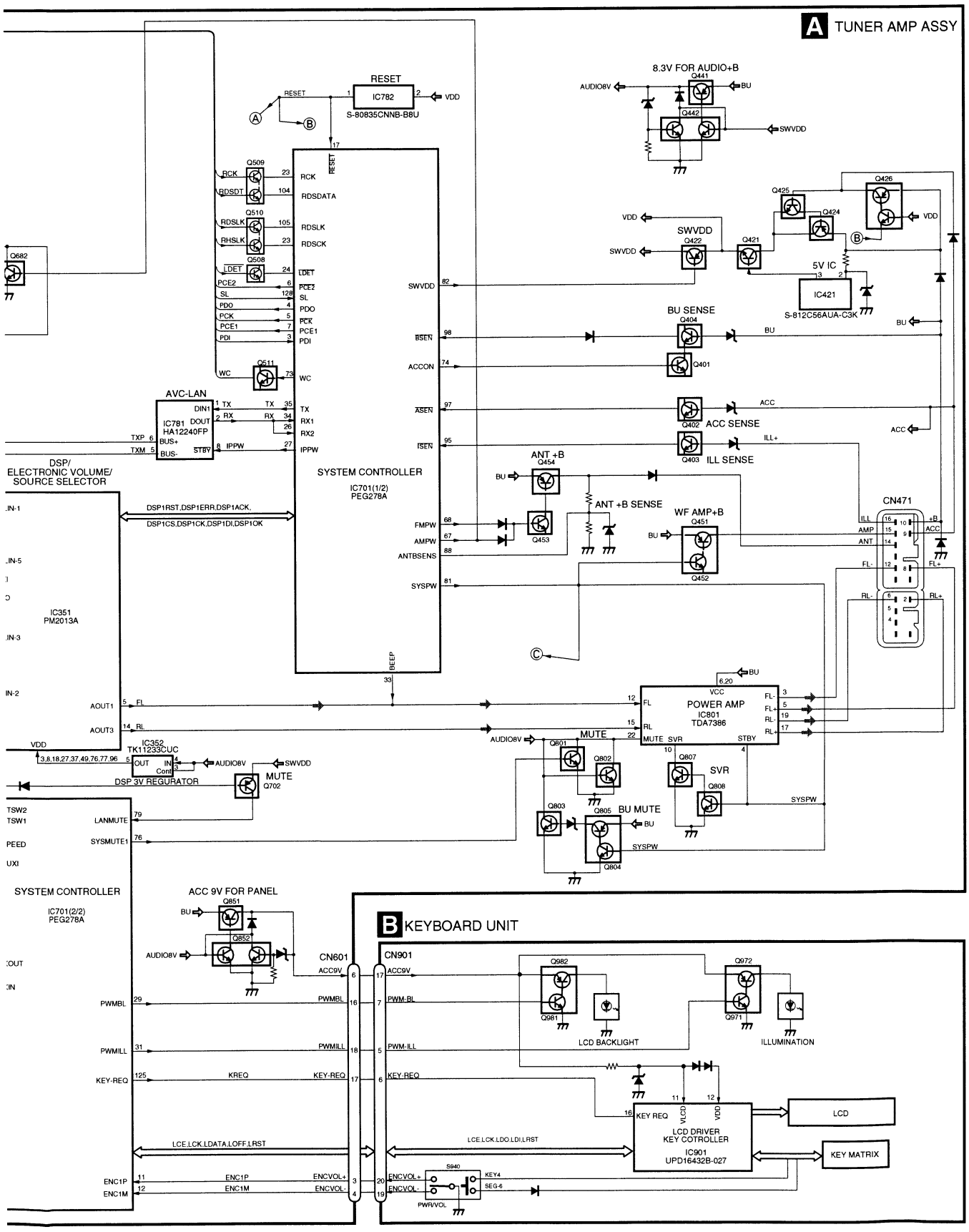
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S101WMA2)	CWX3303
	2	Connector(CN101)	CKS4182
	3	Connector(CN901)	CKS5005
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2 x 4)	CBA1835
	7	Screw(M2 x 3)	CBA1511
	8	Screw(M2 x 3)	CBA1527
	9	•••••	
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2735
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
	32	•••••	
	33	Shaft	CLA4441
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CND1895
	38	Arm	CNC9968
	39	Arm	CND1909
	40	Lever	CND2032
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV7798
	44	Guide	CNV8707
	45	Arm	CNV7800
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV8696
	49	Arm	CNV8697
	50	Gear	CNV7207
	51	Gear	CNV8698
	52	Gear	CNV7209
	53	Gear	CNV8699
	54	Gear	CNV8700
	55	Gear	CNV8701
	56	Rack	CNV8702
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7770
	61	Gear	CNV8703
	62	Arm Unit	CXC5131
	63	Arm Unit	CXC5130
	64	Arm	CNV8704
	65	Damper	CNV7634
	66	Damper	CNV7633
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV8705
	71	Guide	CNV8706
	72	Arm	CNV7805
	73	Gear	CNV7595
	74	Damper	CNV7632
	75	Motor Unit(M1)	CXB6007
	76	Chassis Unit	CXC2318
	77	Screw Unit	CXB8729
	78	Gear Unit	CXC2397
	79	Arm Unit	CXC2316
	80	Arm	CND1896
	81	Arm	CND1894
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	•••••	
	85	Screw(M2 x 5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	•••••	
	89	Washer	YE20FTC
	90	Pickup Unit(P10)(Service)	CXX1856
	91	Screw	IMS26P030FTC
	92	Spring	CBL1635
	93	Clamper	CNV8693

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

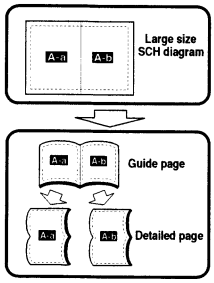
3.1 BLOCK DIAGRAM



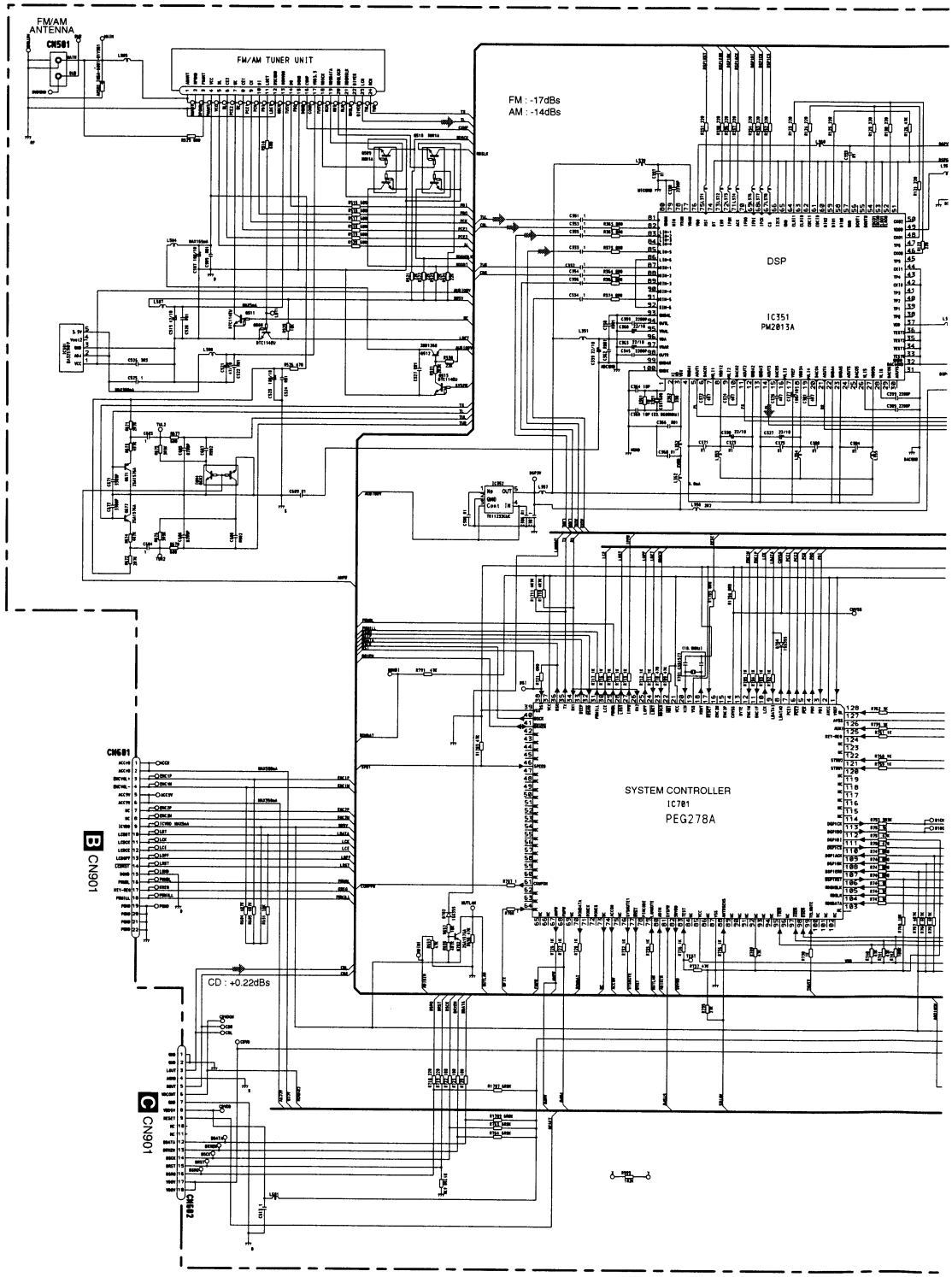

A TUNER AMP ASSY
8.3V FOR AUDIO+B
RESET
IC782
S-80835CNNB-B8U
SYSTEM CONTROLLER
IC701(1/2)
PEG278A
DSP/
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC351
PM2013A
AVC-LAN
IC781
HA12240FP
SWVDD
BU SENSE
ACC SENSE
ILL SENSE
ANT +B
ANT +B SENSE
WF AMP+B
CN471
POWER AMP
IC801
TDA7386
MUTE
SVR
BU MUTE
DSP 3V REGURATOR
IC352
TK11233CUC
MUTE
Q702
ACC 9V FOR PANEL
B KEYBOARD UNIT
CN601
CN901
LCD BACKLIGHT
ILLUMINATION
LCD DRIVER
KEY COTROLLER
IC901
UPD16432B-027
LCD
KEY MATRIX

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



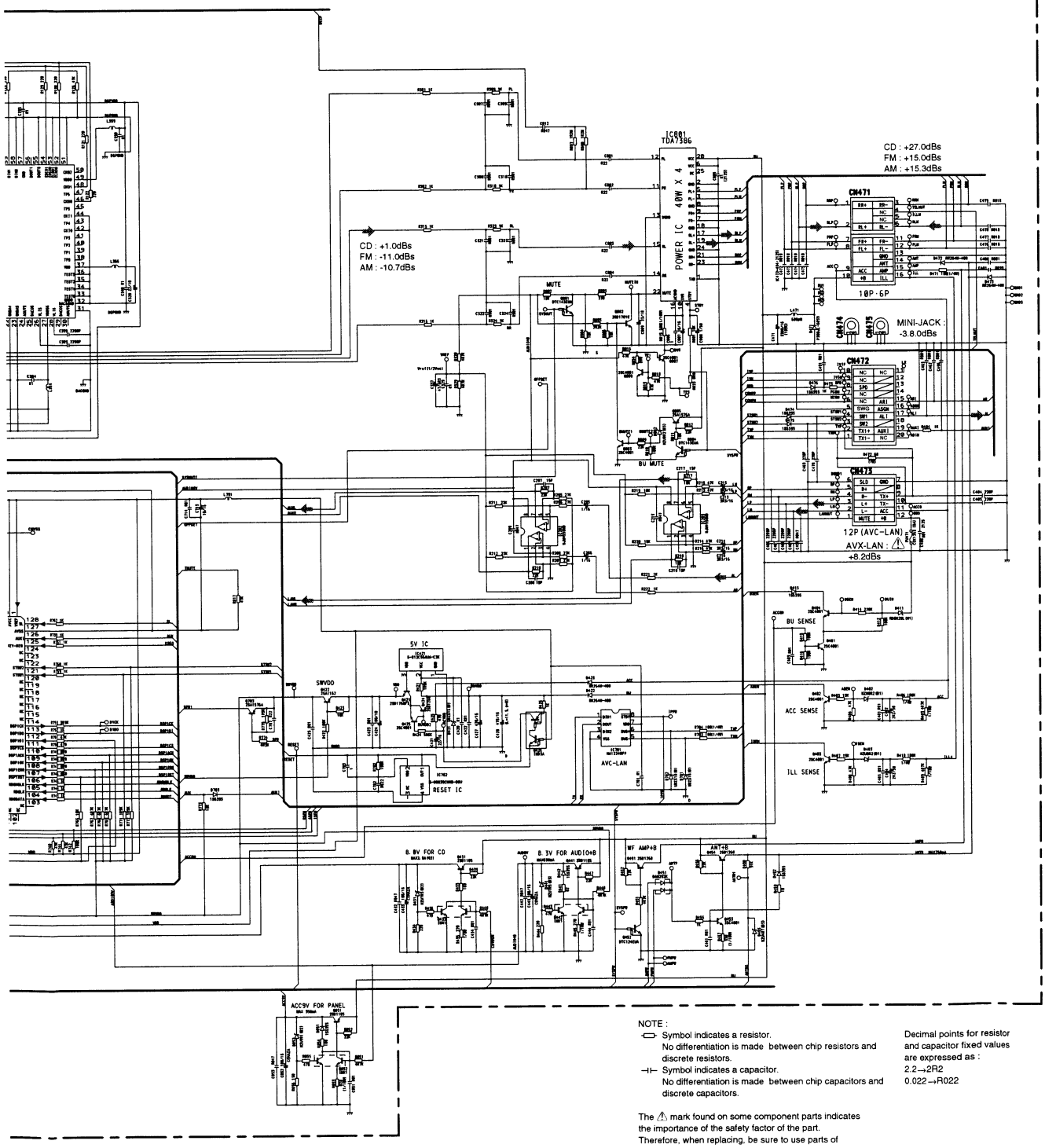
A-a



A

A-b

A TUNER AMP ASSY



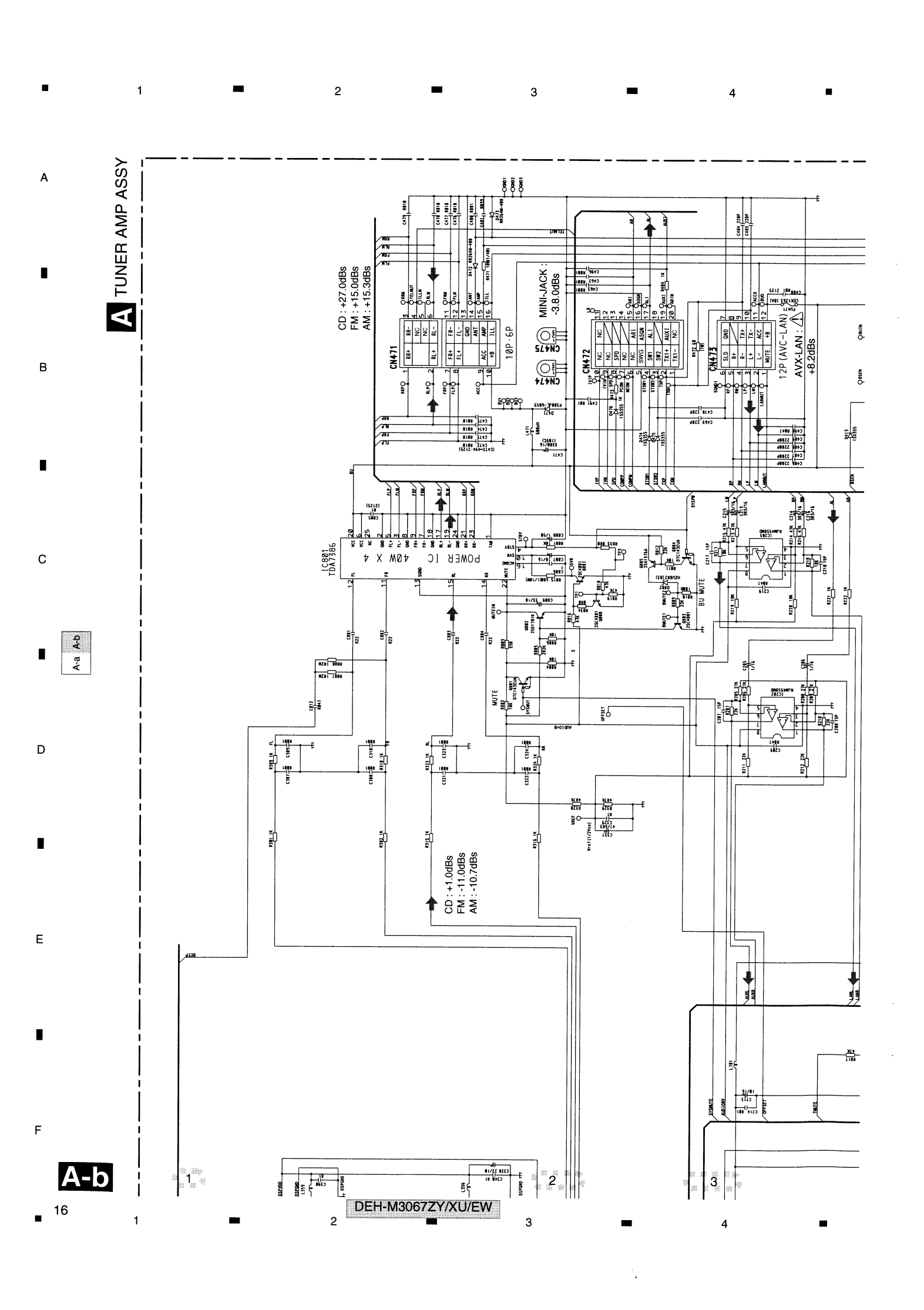
NOTE :

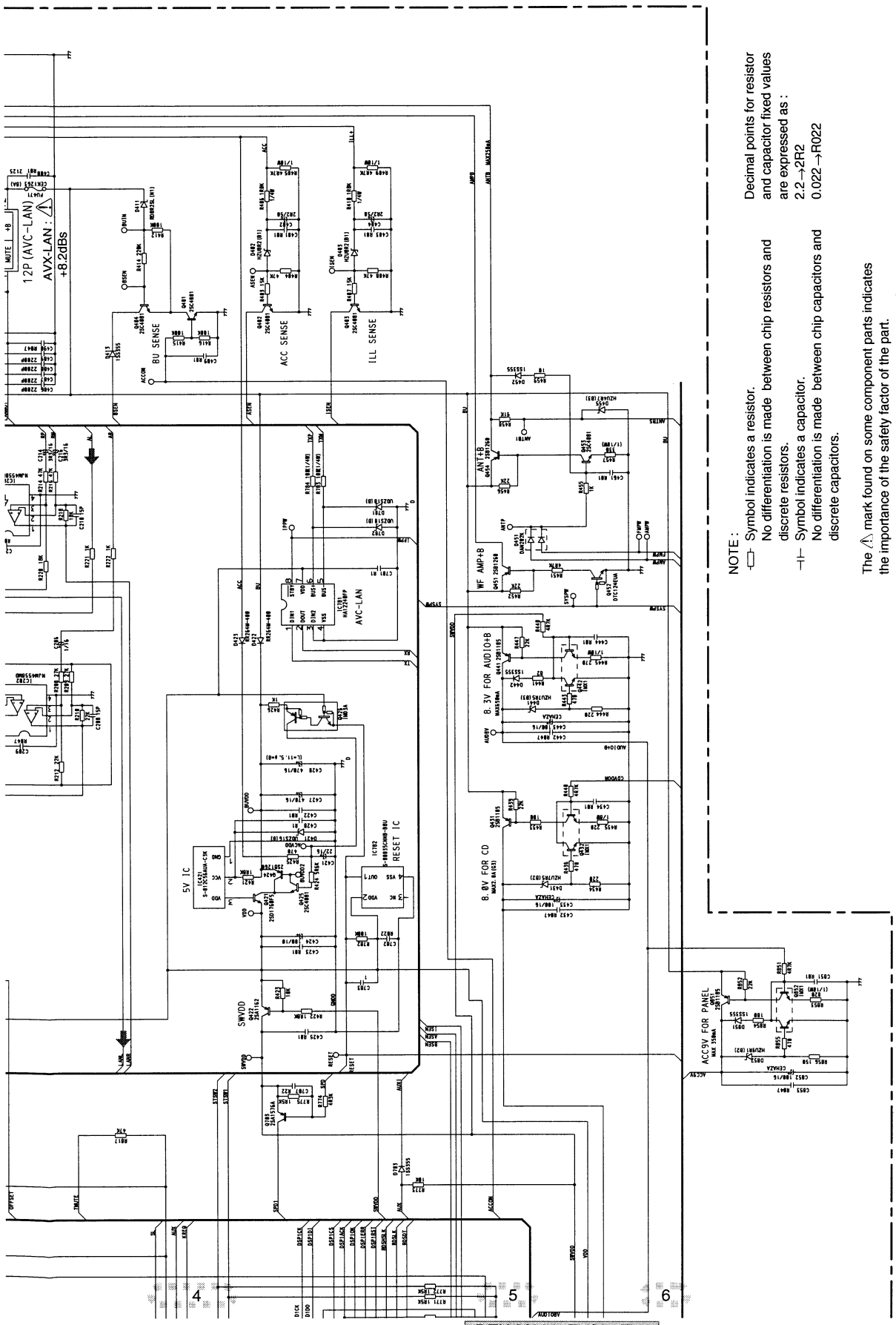
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A


A TUNER AMP ASSY
CD : +27.0dBs
FM : +15.0dBs
AM : +15.3dBs
MINI-JACK : -3.8.0dBs
AVX-LAN : +8.2dBs
CN471
CN472
CN473
CN474
CN475
10P 6P
12P (AVC-LAN)
IC801
TDA7386
POWER IC 40W X 4
MUTE
BU MUTE
OFFSET
CD : +1.0dBs
FM : -11.0dBs
AM : -10.7dBs
A-a A-b
A-b
DEH-M3067ZY/XU/EW
16


12P (AVC-LAN)
AVX-LAN : +8.2dBs
BU SENSE
ACC SENSE
ILL SENSE
AVC-LAN
WF AMP+B
8.3V FOR AUDIO+B
8.0V FOR CD
ACC9V FOR PANEL
5V IC
RESET IC
SWVDD
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as :
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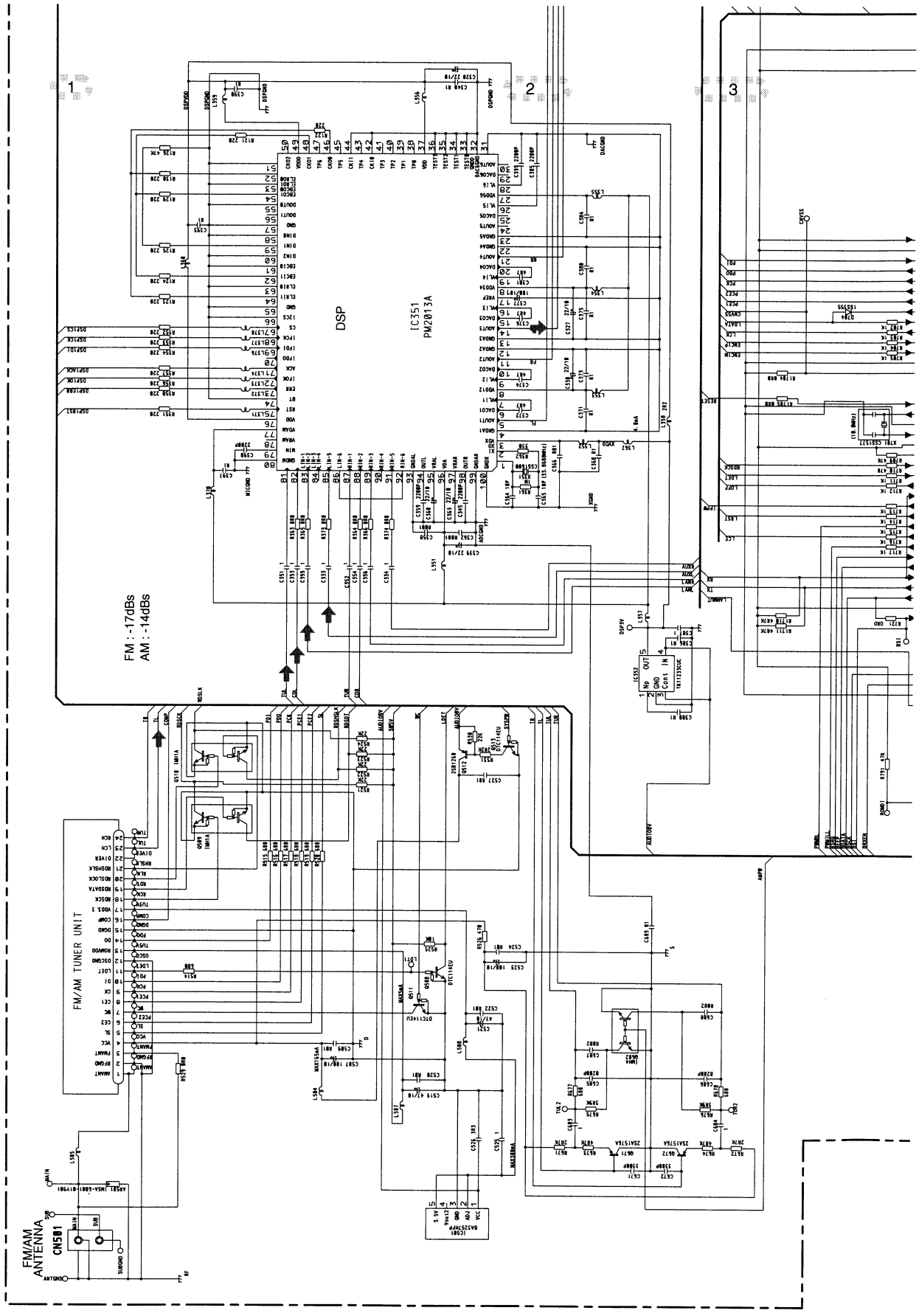
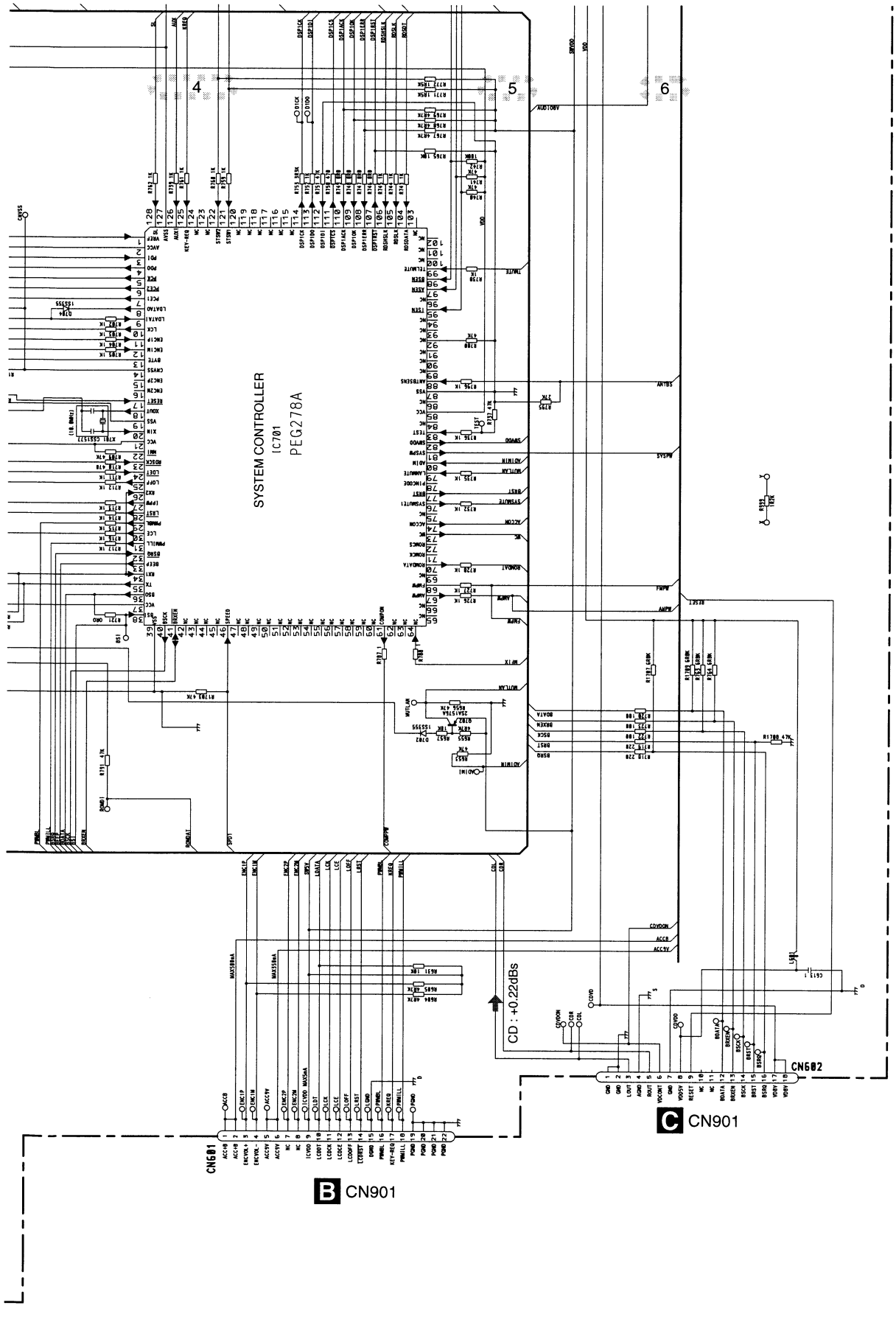
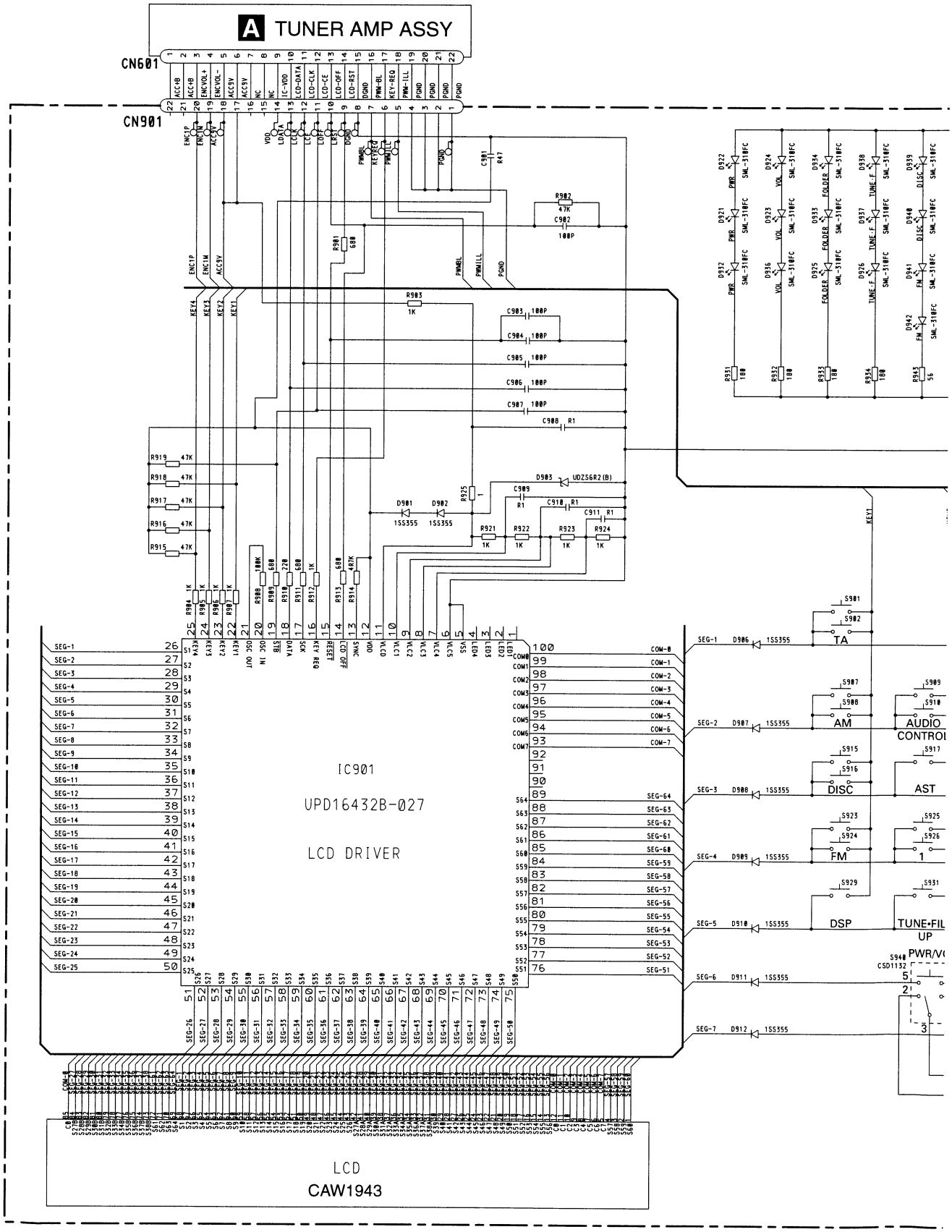
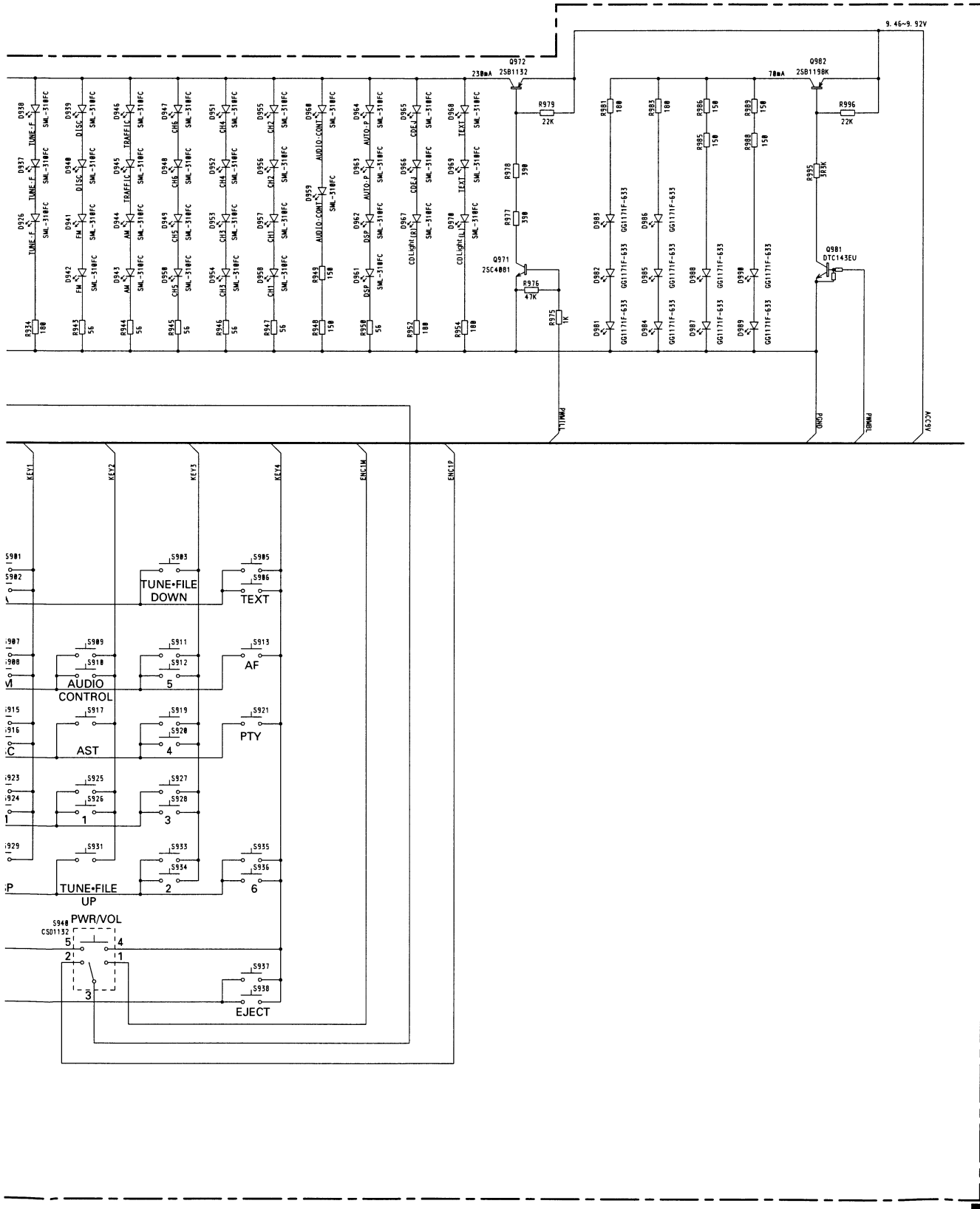

A-b
A-a
DSP
IC351
PM2013A
FM : -17dBs
AM : -14dBs
FM/AM TUNER UNIT
FM/AM ANTENNA
CN501


SYSTEM CONTROLLER
IC701
PEG278A
CD : +0.22dBs
CN602
CN601
B CN901
C CN901
A-b
A-a

3.3 KEYBOARD UNIT

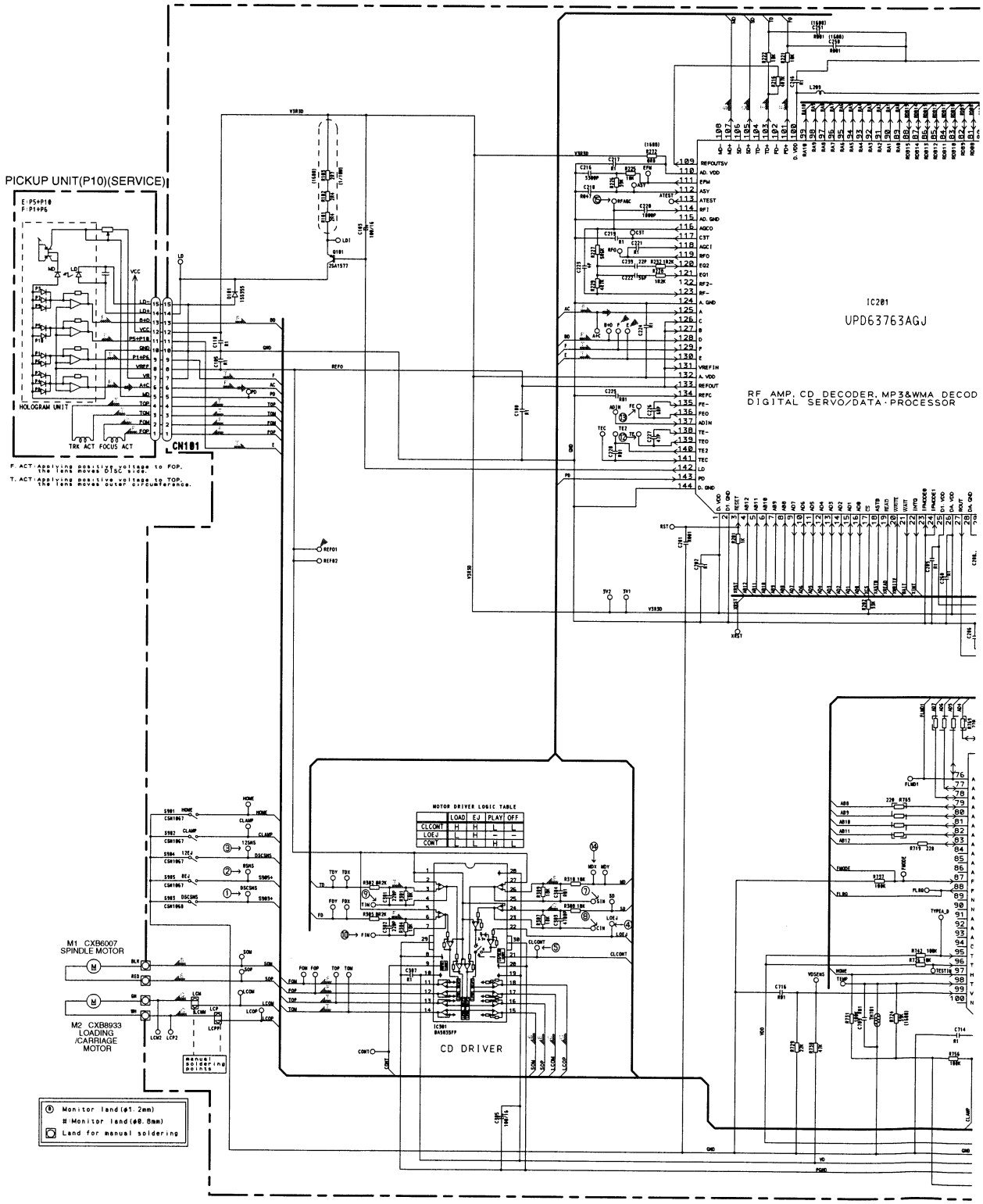


B KEYBOARD UNIT



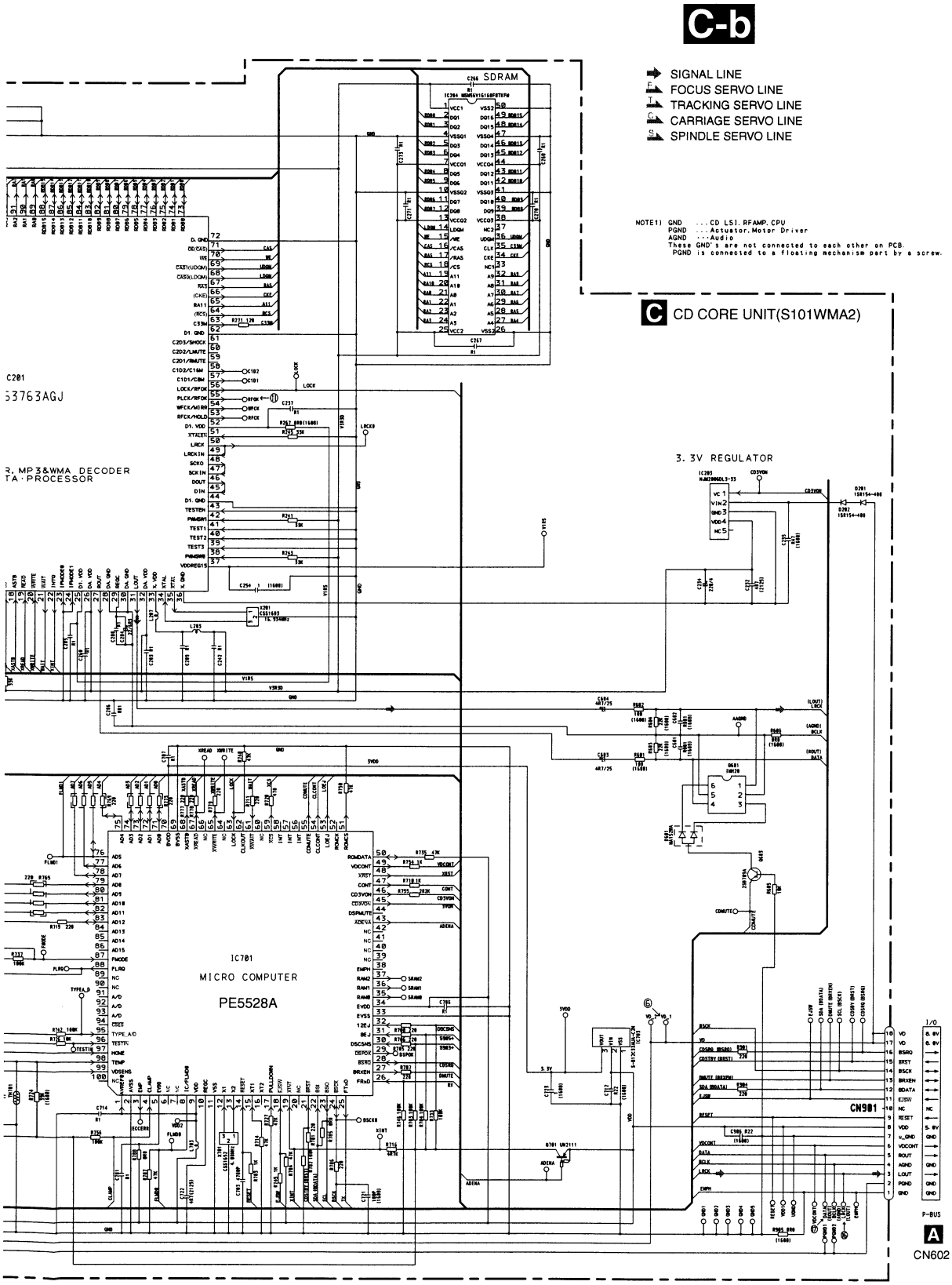
3.4 CD MECHANISM MODULE(GUIDE PAGE)

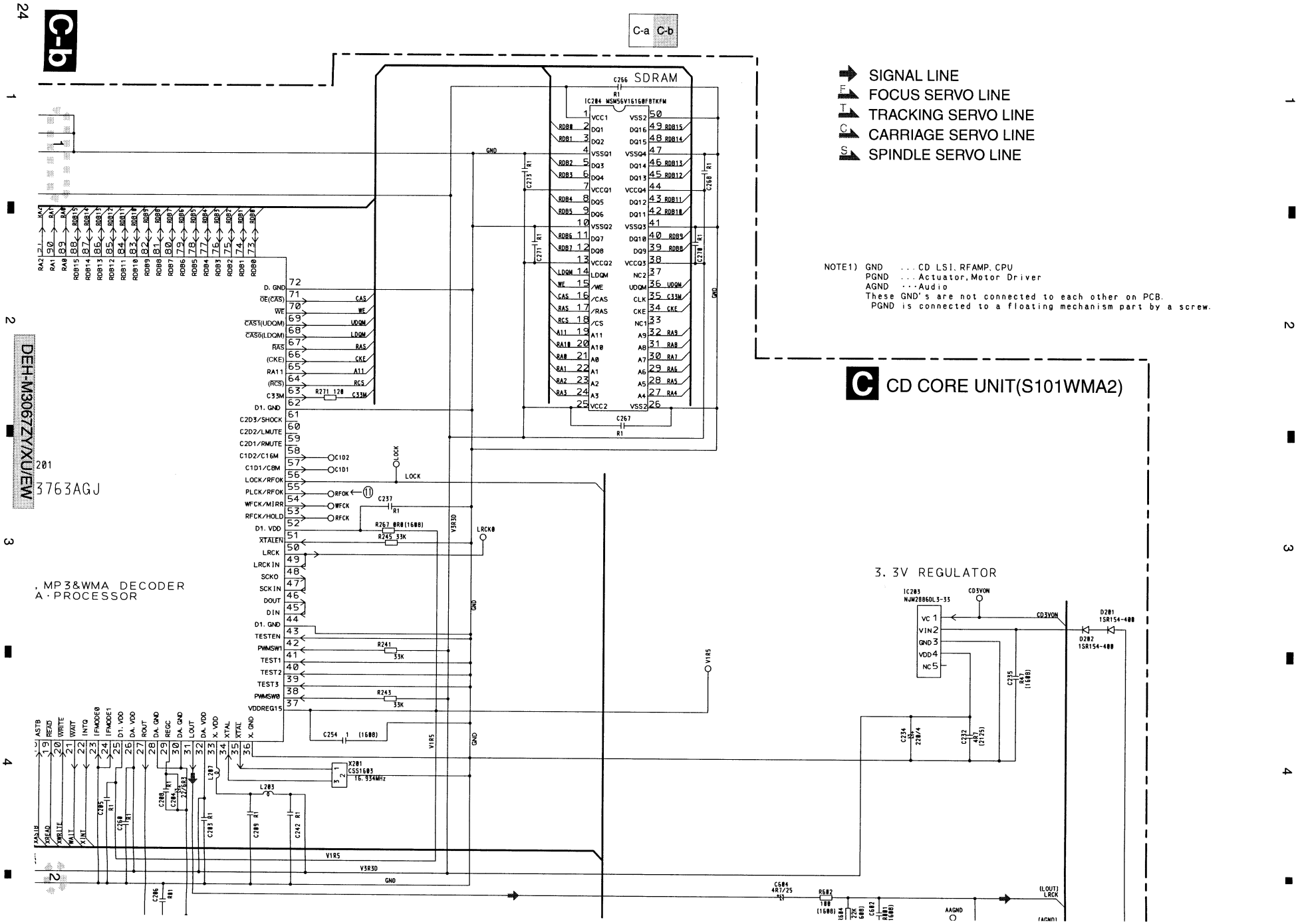
C-a

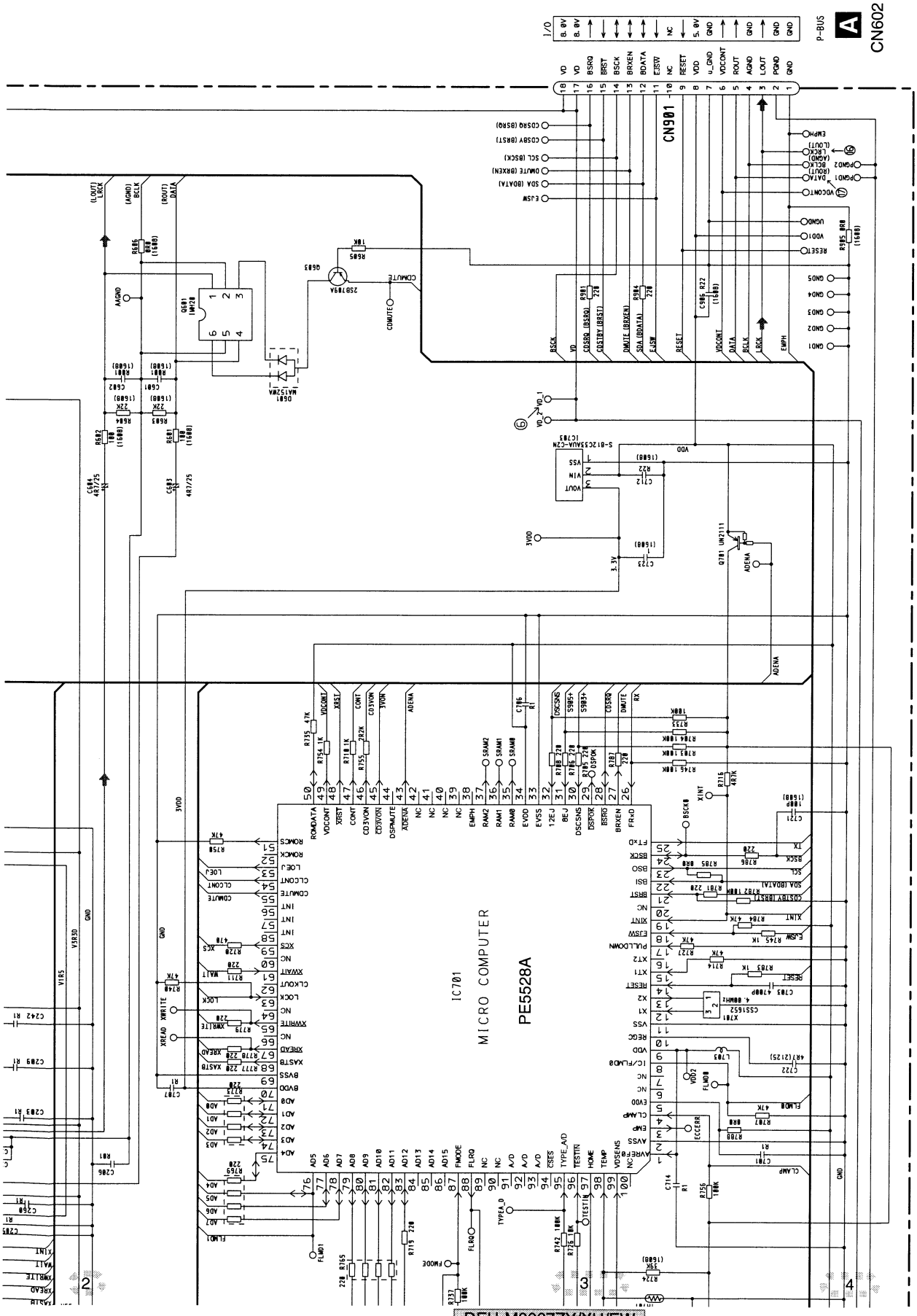


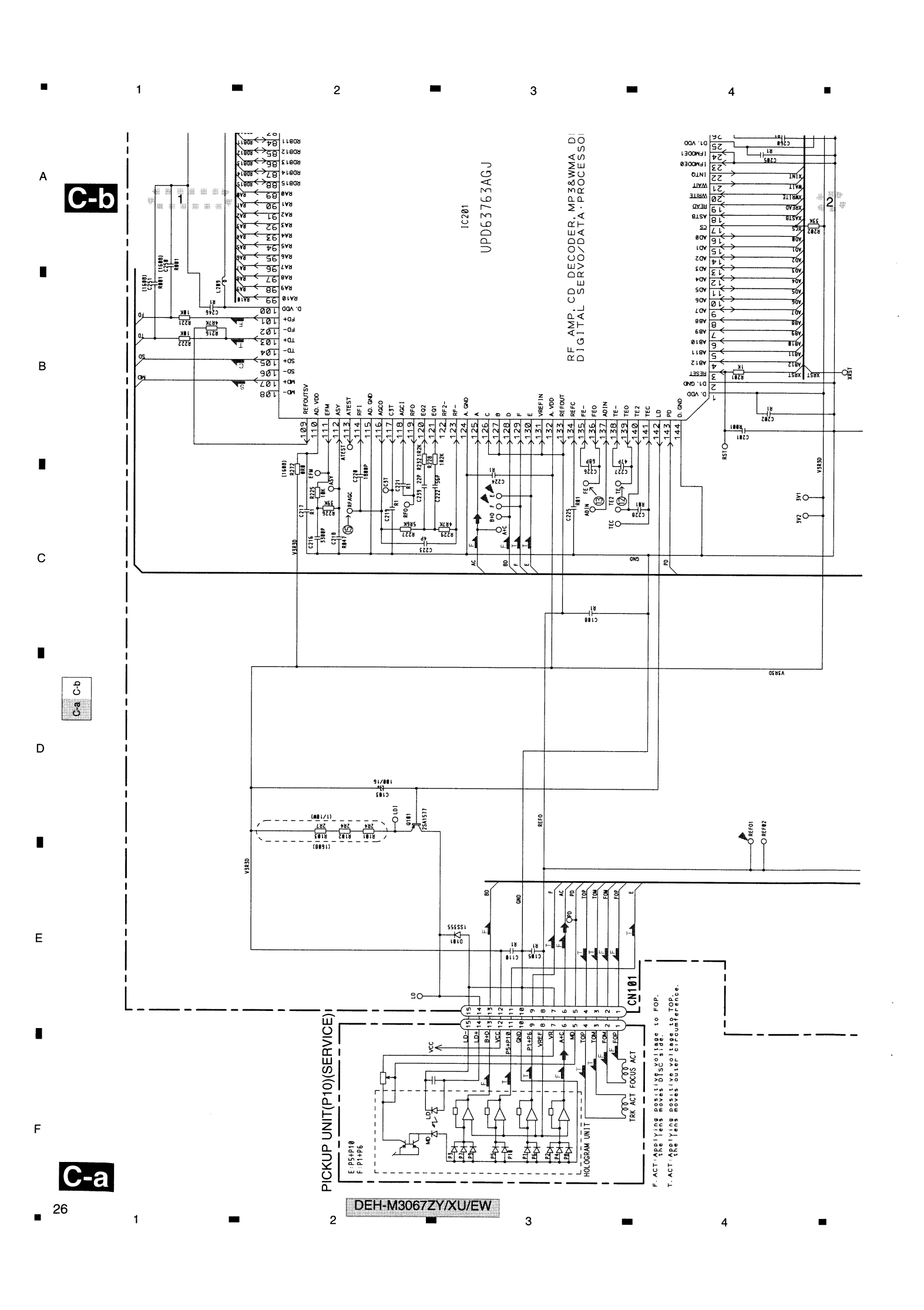
C

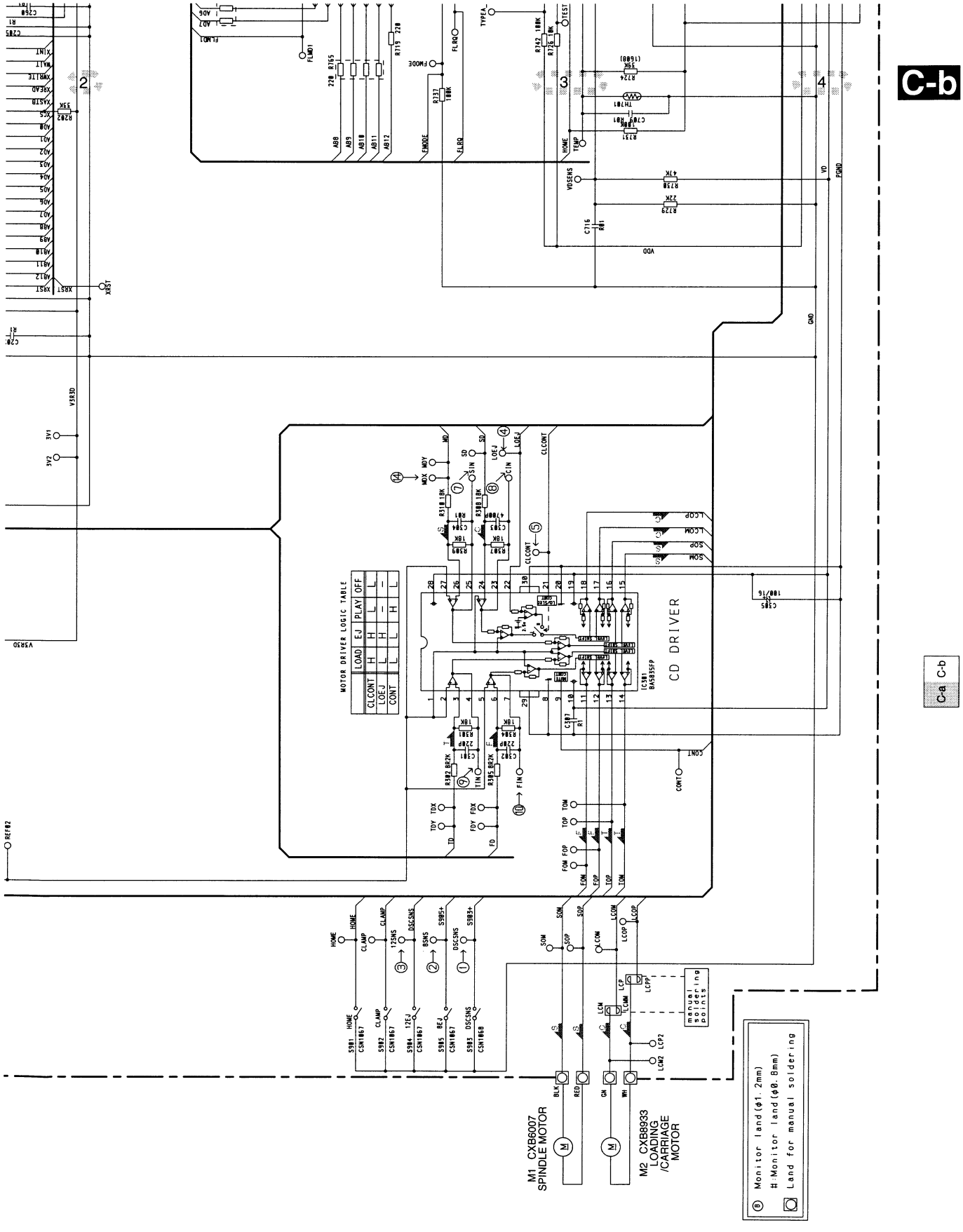
C-b


SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
NOTE1) GND ...CD LSI, RFAMP, CPU
PGND ...Actuator, Motor Driver
AGND ...Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.
C CD CORE UNIT(S101WMA2)
C204 SDRAM
3. 3V REGULATOR
IC701
MICRO COMPUTER
PE5528A
CN901
CN602
P-BUS
I/O


C-b
C-a C-b
SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
SDRAM
IC204 W9M56V1616@FBTKFM
NOTE1) GND ... CD LSI, RFAMP, CPU
PGND ... Actuator, Motor Driver
AGND ... Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.
C CD CORE UNIT(S101WMA2)
DEH-M3067ZY/XU/EW
201
3763AGJ
, MP3&WMA DECODER
A·PROCESSOR
3.3V REGULATOR
IC203
NJW2886DL3-33
CD3VON
D201
1SR154-400
D202
1SR154-400
X201
CSS1603
16.934MHz
V1R5
V3R3D
GND
AAGND
LOCK
LRCK0
(LOUT)
LRCK

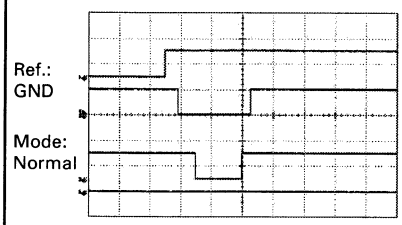
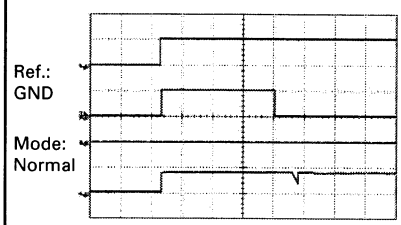
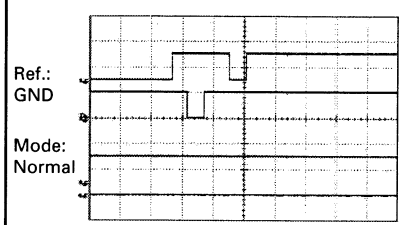
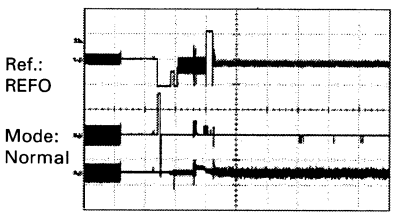
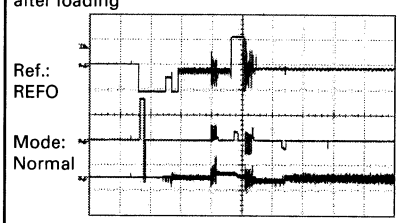
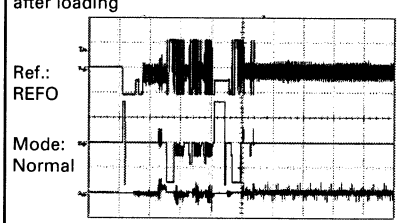
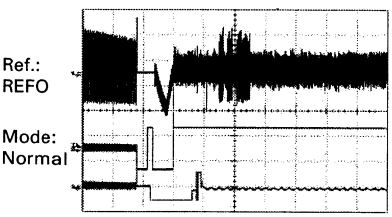
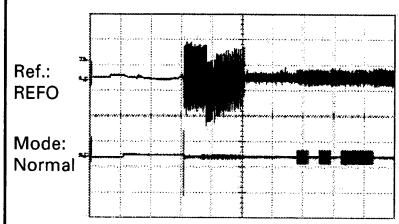
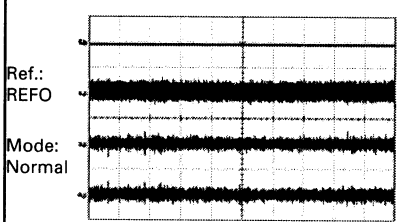
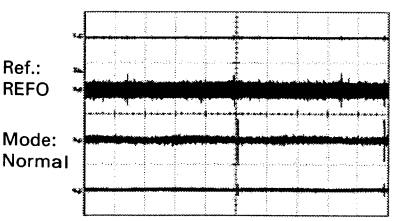
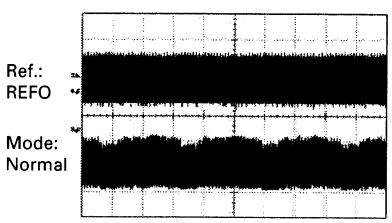
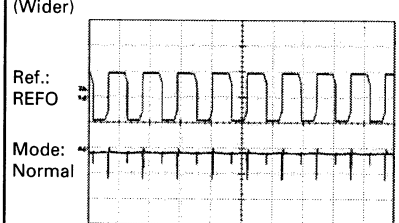

CN602
CN901
IC701
MICRO COMPUTER
PE5528A
DEH-M3067ZY/XU/EW
C-b
C-a C-b
25


C-b
C-a
IC201
UPD63763AGJ
RF AMP, CD DECODER, MP3&WMA DI
DIGITAL SERVO/DATA PROCESSO
PICKUP UNIT(P10)(SERVICE)
E:P5+P10
F:P1+P6
HOLOGRAM UNIT
TRK ACT FOCUS ACT
CN101
F. ACT: Applying positive voltage to FOP.
the lens moves DISC side.
T. ACT: Applying positive voltage to TOP.
the lens moves outer circumference.


C-b
C-a C-b
C-a
CD DRIVER
IC301 BA5835FP
MOTOR DRIVER LOGIC TABLE
LOAD EJ PLAY OFF
CLCONT H H L L
LOEJ L H L H
CONT L L H L
M1 CXB6007 SPINDLE MOTOR
M2 CXB8933 LOADING /CARRIAGE MOTOR
S301 HOME CSN1067
S302 CLAMP CSN1067
S304 12EJ CSN1067
S305 REJ CSN1067
S303 DSCSNS CSN1068
manual soldering points
Monitor land(φ1.2mm)
Monitor land(φ0.8mm)
Land for manual soldering

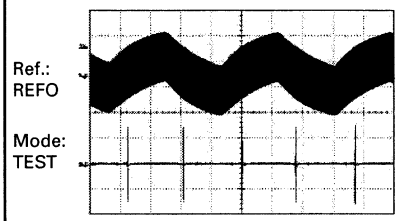
● Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65 V)

① DSCSNS 5 V/div 500 ms/div ② 8SNS 5 V/div ③ 12SNS 5 V/div ④ LOEJ 5 V/div 12 cm CD Loading operation  	① DSCSNS 5 V/div 500 ms/div ⑤ CLCONT 5 V/div ④ LOEJ 5 V/div ⑥ VD 10 V/div 12 cm CD Loading operation  	① DSCSNS 5 V/div 500 ms/div ② 8SNS 5 V/div ③ 12SNS 5 V/div ④ LOEJ 5 V/div 8 cm CD Loading operation 
⑦ SIN 1 V/div 2 s/div ⑧ CIN 500 mV/div ⑨ TIN 500 mV/div 12 cm CD-DA setup operation after loading  	⑦ SIN 1 V/div 1 s/div ⑧ CIN 500 mV/div ⑨ TIN 500 mV/div 12 cm CD-ROM(1 session) setup operation after loading  	⑦ SIN 1 V/div 2 s/div ⑧ CIN 500 mV/div ⑨ TIN 500 mV/div 12 cm CD-ROM(3 sessions) setup operation after loading 
⑩ FIN 200 mV/div 500 ms/div ⑪ RFOK 2 V/div ⑦ SIN 2 V/div 12 cm CD-DA Source On setup operation  	⑫ TE 500 mV/div 200 ms/div ⑬ FE 500 mV/div Source On setup operation  	⑬ FE 500 mV/div 20 ms/div ⑩ FIN 500 mV/div ⑫ TE 500 mV/div ⑨ TIN 500 mV/div CD-DA Play operation 
⑬ FE 500 mV/div 20 ms/div ⑩ FIN 500 mV/div ⑫ TE 500 mV/div ⑨ TIN 500 mV/div CD-ROM play operation(Regular track Jump)  	⑭ MDX 1 V/div 50 ms/div ⑦ SIN 200 mV/div Spindle waveform during play operation  	⑭ MDX 2 V/div 5 µs/div ⑦ SIN 1 V/div Spindle waveform during play operation (Wider) 

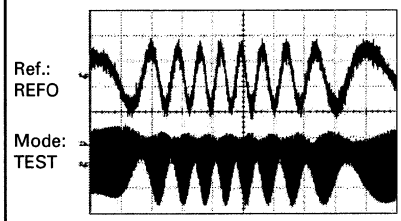
⑩ FIN 500 mV/div 200 ms/div
⑬ FE 500 mV/div

Focus Search waveform



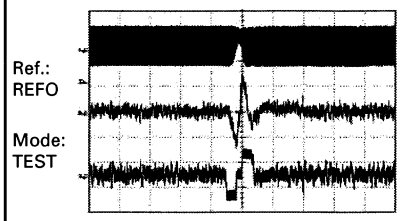
⑫ TE 500 mV/div 2 ms/div
⑮ RFAGC 500 mV/div

Track Open waveform



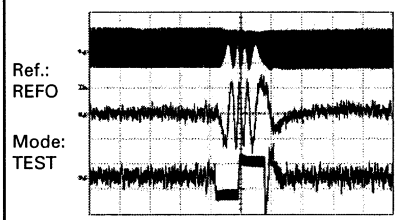
⑮ RFAGC 1 V/div 500 µs/div
⑫ TE 500 mV/div
⑨ TIN 500 mV/div

1 Track Jump waveform



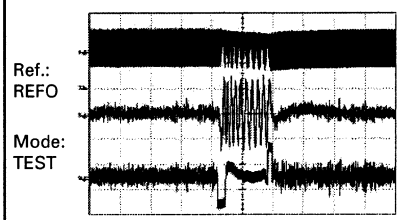
⑮ RFAGC 1 V/div 500 µs/div
⑫ TE 500 mV/div
⑨ TIN 500 mV/div

4 Tracks Jump waveform



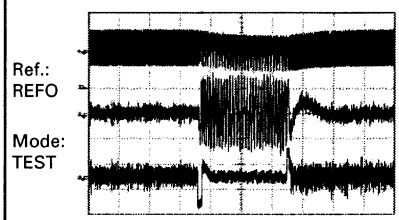
⑮ RFAGC 1 V/div 1 ms/div
⑫ TE 500 mV/div
⑨ TIN 500 mV/div

10 Tracks Jump waveform



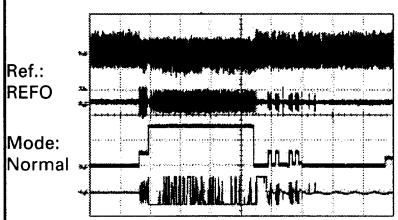
⑮ RFAGC 1 V/div 2 ms/div
⑫ TE 500 mV/div
⑨ TIN 500 mV/div

32 Tracks Jump waveform



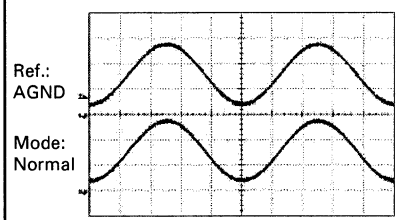
⑮ RFAGC 1 V/div 200 ms/div
⑫ TE 1 V/div
⑧ CIN 500 mV/div
⑦ SIN 2 V/div

Search operation(Outter to Inner)



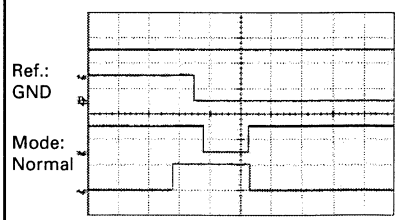
⑯ LOUT 1 V/div 200 µs/div
⑰ ROUT 1 V/div

Analog audio waveform



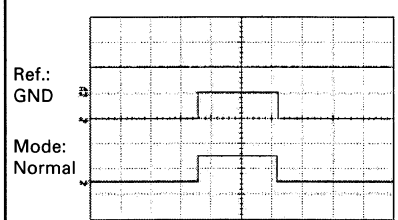
① DSCSNS 5 V/div 500 ms/div
② 8SNS 5 V/div
③ 12SNS 5 V/div
④ LOEJ 5 V/div

12 cm CD Eject operation



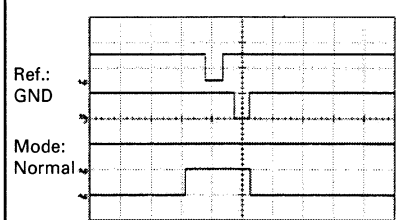
① DSCSNS 5 V/div 500 ms/div
⑤ CLCONT 5 V/div
④ LOEJ 5 V/div

12 cm CD Eject operation



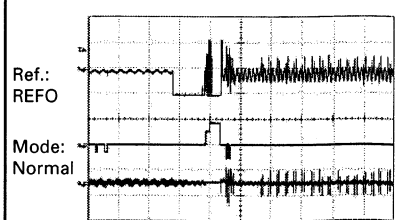
① DSCSNS 5 V/div 500 ms/div
② 8SNS 5 V/div
③ 12SNS 5 V/div
④ LOEJ 5 V/div

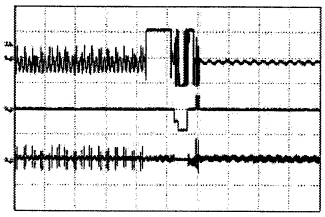
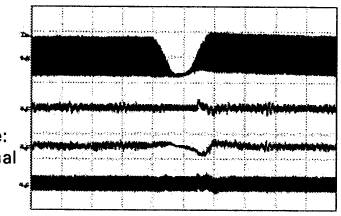
8 cm CD Eject operation



⑦ SIN 1 V/div 500 ms/div
⑧ CIN 500 mV/div
⑨ TIN 500 mV/div

CD-DA >> CD-ROM mode change(Band key)



⑦ SIN 1 V/div 500 ms/div ⑧ CIN 500 mV/div ⑨ TIN 500 mV/div CD-ROM >> CD-DA mode change(Band key) Ref.: REFO Mode: Normal 	⑮ RFAGC 1 V/div 500 µs/div ⑨ TIN 1 V/div ⑫ TE 1 V/div ⑩ FIN 1 V/div Black dot(800 µm) during play Ref.: REFO Mode: Normal 	

A

B

C

D

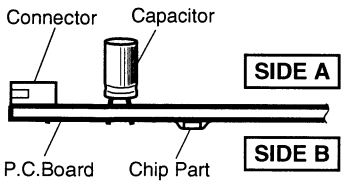
E

F

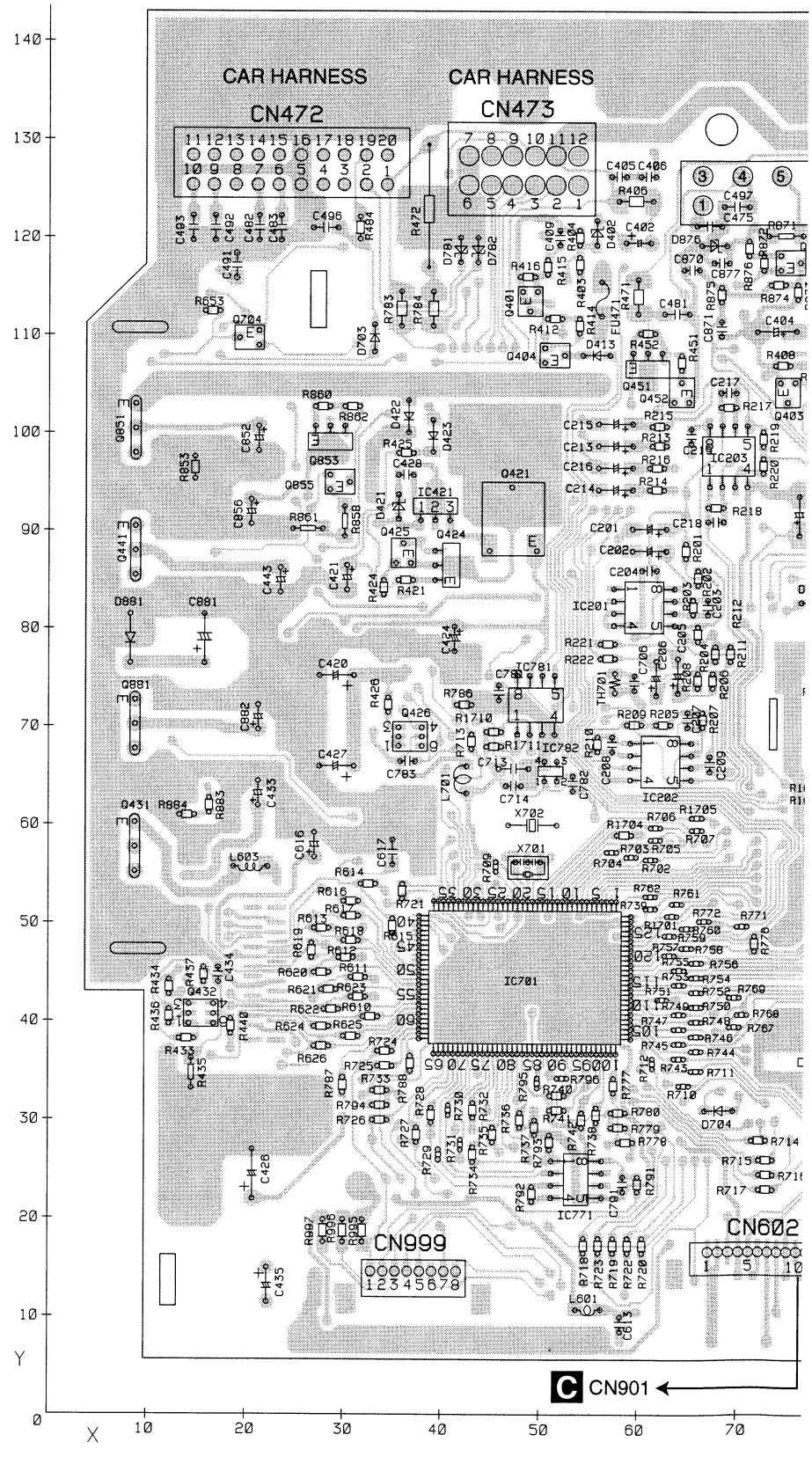
4. PCB CONNECTION DIAGRAM
4.1 TUNER AMP ASSY

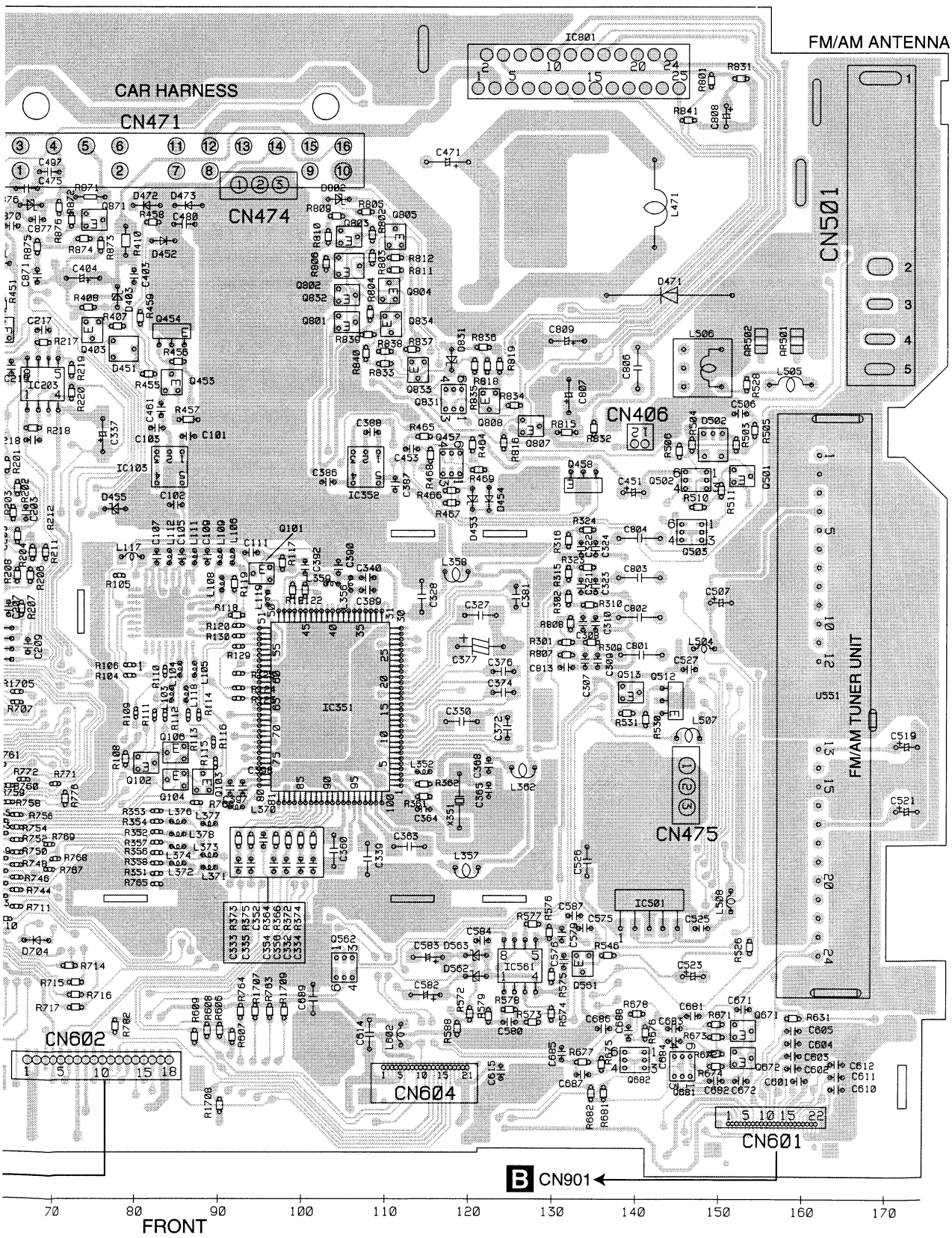
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



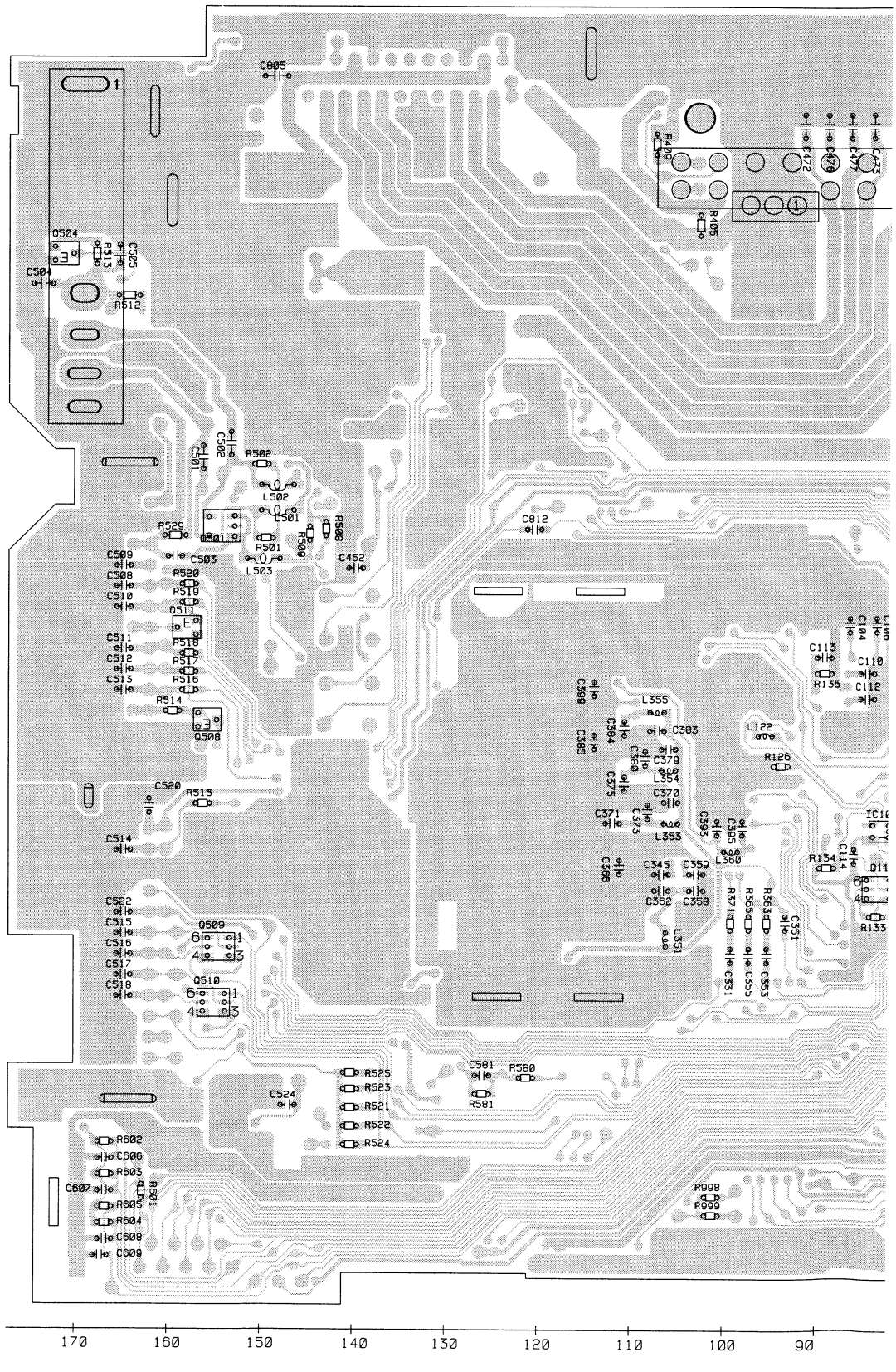
A TUNER AMP ASSY




SIDE A
FM/AM ANTENNA
CAR HARNESS
CN471
CN474
CN501
CN406
CN475
CN602
CN604
CN601
FM/AM TUNER UNIT
IC801
IC351
IC501
IC561
IC203
IC105
IC352
B CN901
FRONT
70
80
90
100
110
120
130
140
150
160
170

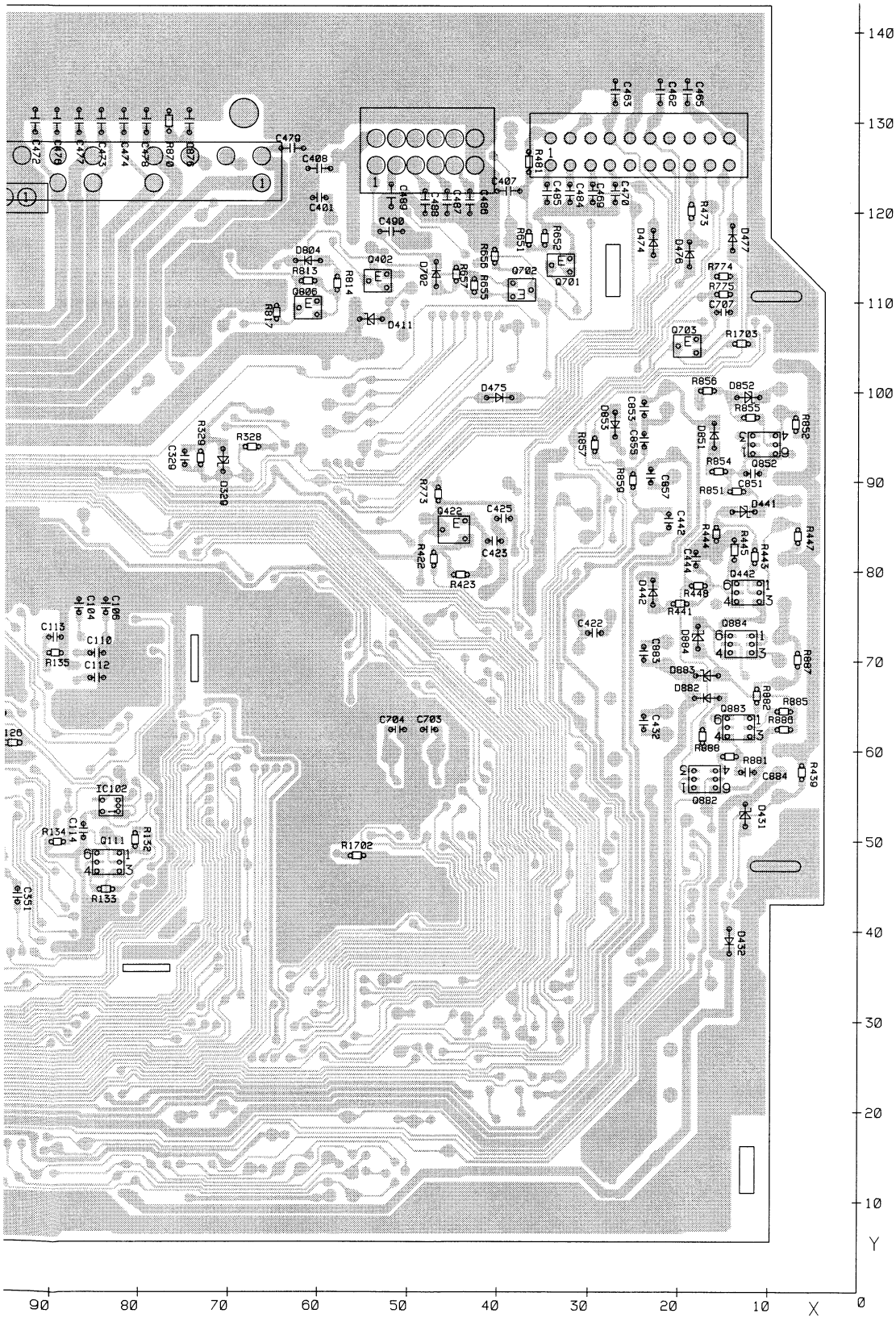
A

A TUNER AMP ASSY



A

SIDE B



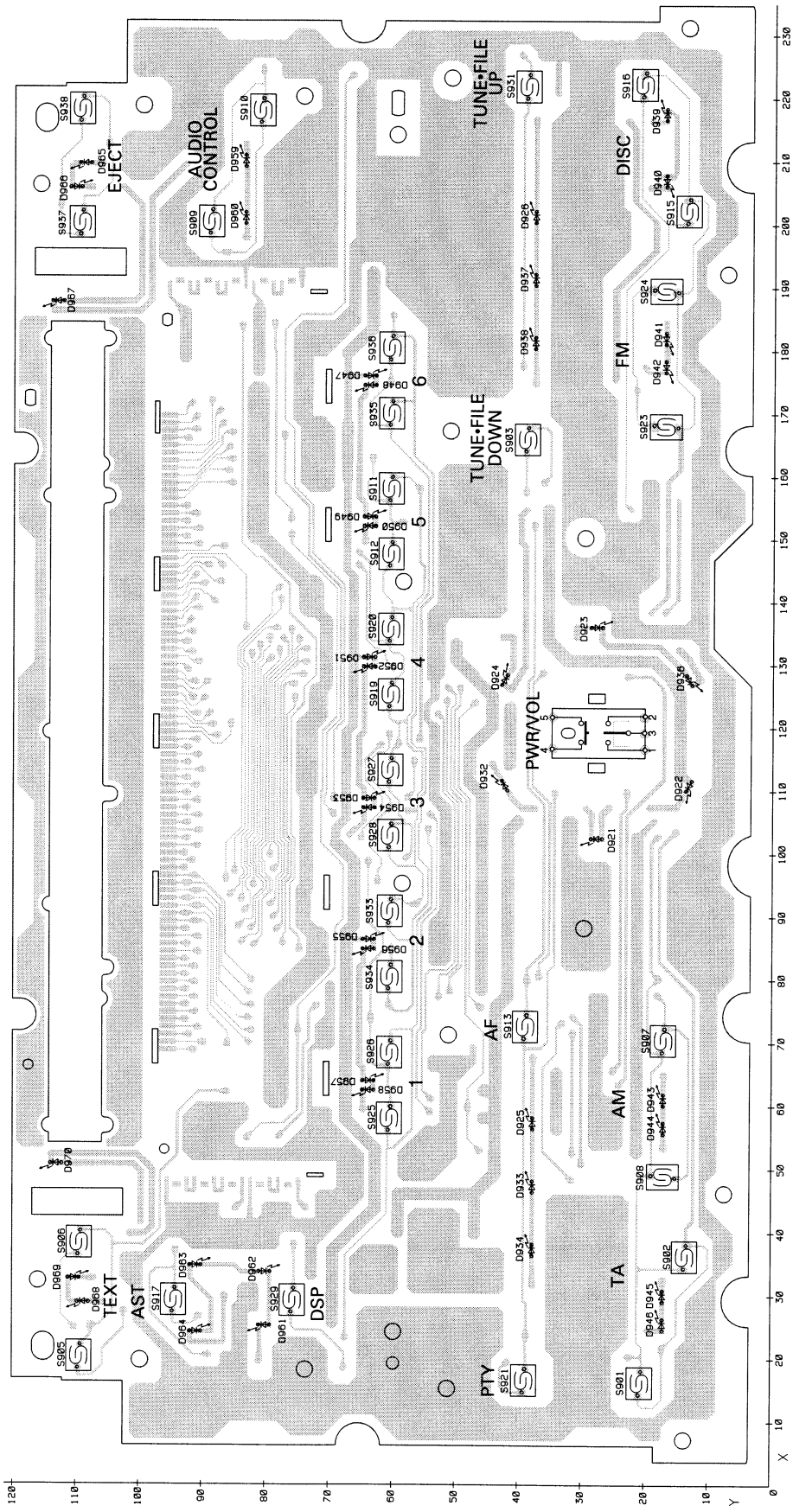
A B C D E F

DEH-M3067ZY/XU/EW

4.2 KEYBOARD UNIT

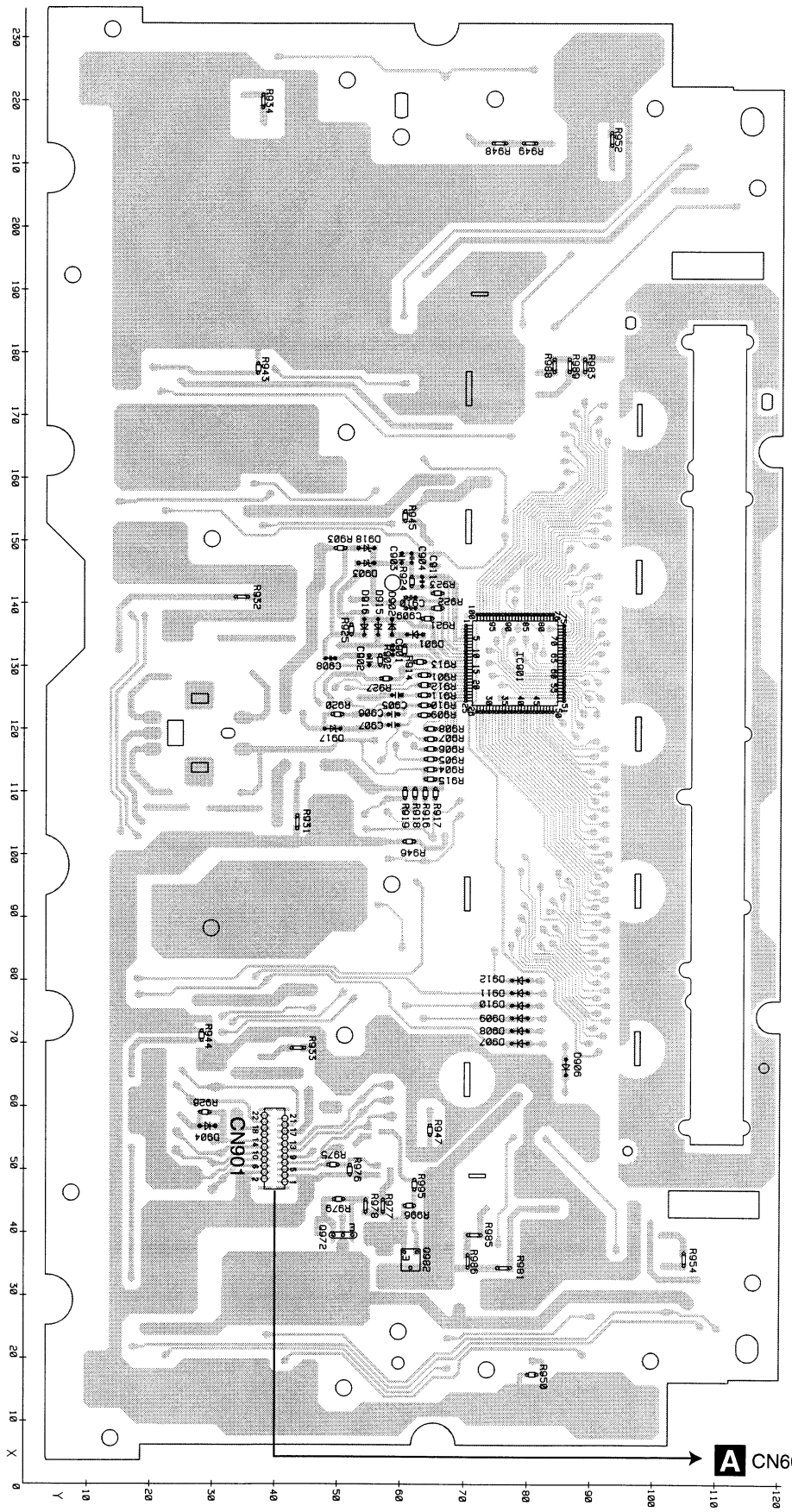
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

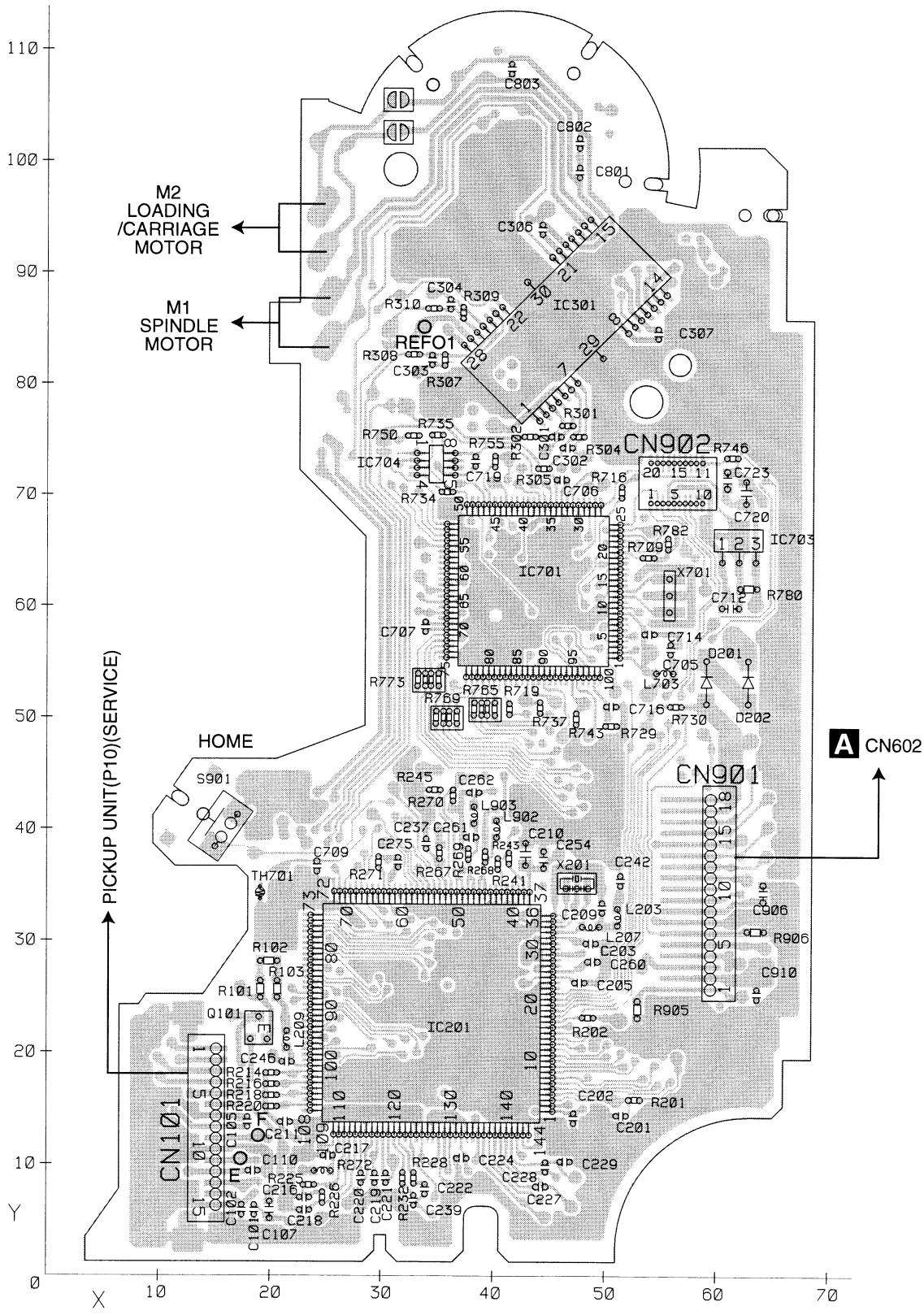
SIDE B



4.3 CD CORE UNIT(S101WMA2)

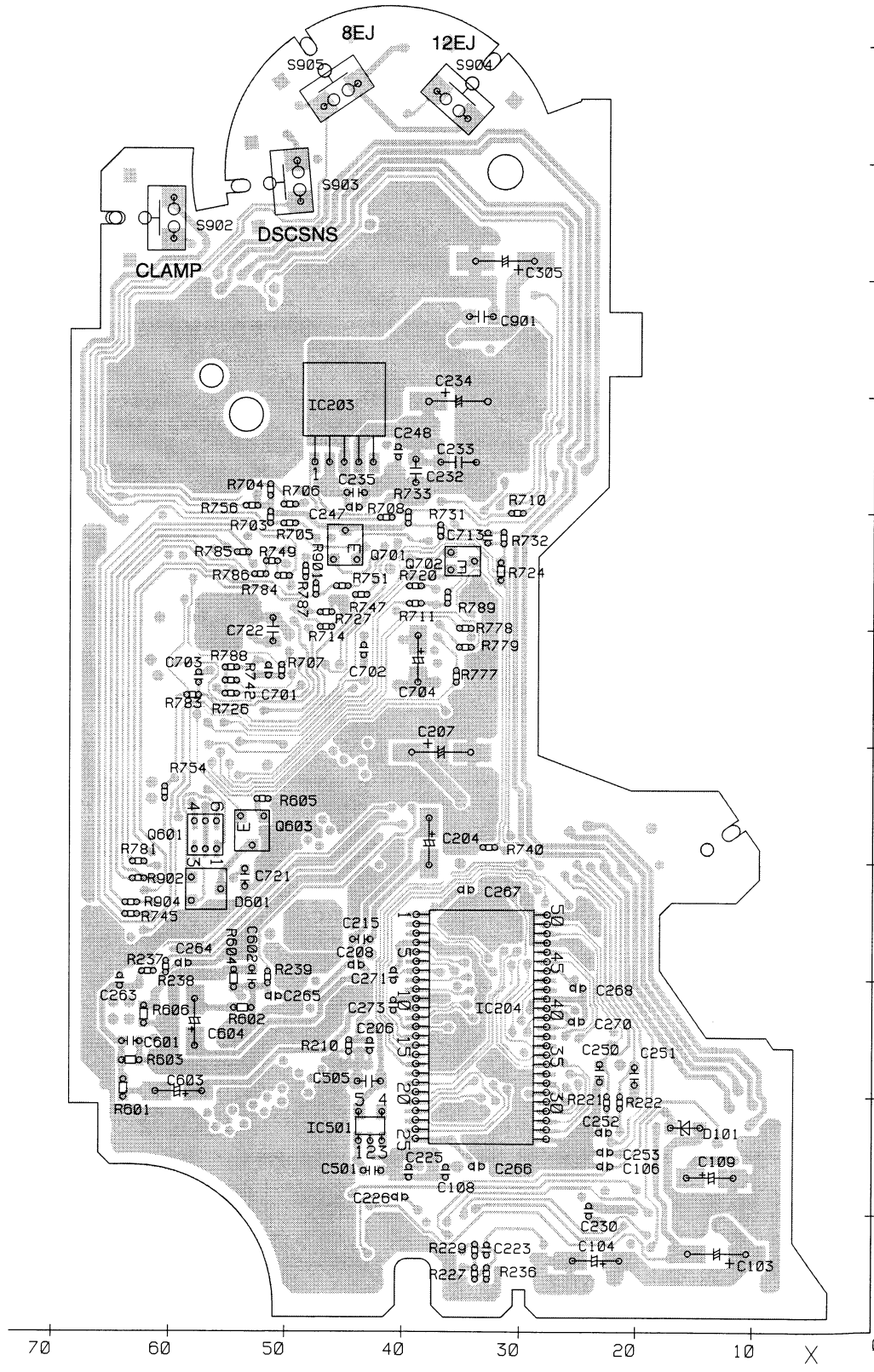
C CD CORE UNIT(S101WMA2)

SIDE A



C CD CORE UNIT(S101WMA2)

SIDE B



5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

Unit Number: CWN2097
Unit Name : Tuner Amp Assy
Unit Number:
Unit Name : Keyboard Unit
Unit Number: CWX3303
Unit Name : CD Core Unit(S101WMA2)

A

Unit Number: CWN2097
Unit Name : Tuner Amp Assy

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 202	(A,62,66) IC	NJM4558MD
IC 203	(A,69,98) IC	NJM4558MD
IC 351	(A,104,59) IC	PM2013A
IC 352	(A,108,88) IC	TK11233CUC
IC 421	(A,39,92) IC	S-812C56AUA-C3K
IC 501	(A,142,38) IC	BA3257HFP
IC 701	(A,49,44) IC	PEG278A
IC 781	(A,50,72) IC	HA12240FP
IC 782	(A,51,65) IC	S-80835CNNB-B8U
IC 801	(A,121,133) IC	TDA7386
Q 401	(A,49,113) Transistor	2SC4081
Q 402	(B,53,112) Transistor	2SC4081
Q 403	(A,75,104) Transistor	2SC4081
Q 404	(A,51,108) Transistor	2SC4081
Q 421	(A,47,92) Transistor	2SD1760F5
Q 422	(B,45,85) Transistor	2SA1162
Q 424	(A,41,86) Transistor	2SB1260
Q 425	(A,36,88) Transistor	2SC4081
Q 426	(A,37,69) Transistor	IMD3A
Q 431	(A,9,60) Transistor	2SB1185
Q 432	(A,16,41) Transistor	IMX1
Q 441	(A,9,90) Transistor	2SB1185
Q 442	(B,12,78) Transistor	IMX1
Q 451	(A,61,107) Transistor	2SB1260
Q 452	(A,64,104)	DTC124EUA
Q 453	(A,85,98) Transistor	2SC4081
Q 454	(A,85,104) Transistor	2SB1260
Q 508	(B,156,66) Transistor	DTC114EU
Q 509	(B,155,41) Transistor	IMH1A
Q 510	(B,155,35) Transistor	IMH1A
Q 511	(B,158,76) Transistor	DTC114EU
Q 512	(A,145,60) Transistor	2SB1260
Q 513	(A,140,61) Transistor	DTC114EU
Q 671	(A,153,20) Transistor	2SA1576A
Q 672	(A,153,17) Transistor	2SA1576A
Q 682	(A,140,17)	IMH4
Q 702	(B,37,111) Transistor	2SA1576A
Q 703	(B,19,105) Transistor	2SA1576A
Q 801	(A,106,105)	DTC143EUA
Q 802	(A,106,112) Transistor	2SD1781K
Q 803	(A,106,115) Transistor	2SC4081
Q 804	(A,111,109)	DTC143EUA
Q 805	(A,111,115) Transistor	2SA1576A
Q 807	(A,128,93) Transistor	2SC4081
Q 808	(A,123,96) Transistor	2SC4081
Q 851	(A,9,103) Transistor	2SB1185
Q 852	(B,11,94) Transistor	IMX1
D 402	(A,56,120) Diode	HZU8R2(B1)
D 403	(A,78,108) Diode	HZU8R2(B1)
D 411	(B,54,108) Diode	RD8R2SL(N1)
D 413	(A,56,108) Diode	1SS355
D 421	(A,36,92) Diode	UDZS16(B)
D 422	(A,37,102) Diode	RR264M-400
D 423	(A,39,100) Diode	RR264M-400
D 431	(B,13,53) Diode	HZU7R5(B2)
D 441	(B,13,87) Diode	HZU7R5(B3)
D 442	(B,23,78) Diode	1SS355
D 451	(A,79,102) Diode	DAN202K
D 452	(A,84,115) Diode	1SS355
D 455	(A,78,83) Diode	HZU4R7(B3)
D 471	(A,152,108) Diode	P300JL-6059
D 472	(A,82,119) Diode	RR264M-400
D 473	(A,87,119) Diode	RR264M-400
D 474	(B,23,117) Diode	1SS355
D 475	(B,40,99) Diode	1SS355

Circuit Symbol and No.		Part No.
D 476	(B,19,115) Diode	1SS355
D 702	(B,47,113) Diode	1SS355
D 703	(A,33,110) Diode	1SS355
D 704	(A,68,31) Diode	1SS355
D 781	(A,42,119) Diode	UDZS18(B)
D 782	(A,44,119) Diode	UDZS18(B)
D 802	(A,105,120) Diode	HZU8R2(B3)
D 851	(B,16,95) Diode	1SS355
D 852	(B,12,99) Diode	HZU9R1(B2)
L 351	(B,106,42) Inductor	CTF1379
L 352	(A,115,51) Inductor	CTF1379
L 353	(B,106,55) Inductor	CTF1379
L 354	(B,106,60) Inductor	CTF1379
L 355	(B,107,67) Inductor	CTF1379
L 356	(A,106,74) Inductor	CTF1379
L 357	(A,120,40) Inductor	LCTAW2R2J2520
L 358	(A,119,75) Inductor	LCTAW2R2J2520
L 359	(A,104,74) Inductor	CTF1379
L 360	(B,99,52) Inductor	CTF1379
L 362	(A,127,52) Inductor	LCTAW2R2J2520
L 370	(A,92,47) Inductor	CTF1379
L 371	(A,89,40) Inductor	CTF1379
L 372	(A,85,40) Inductor	CTF1379
L 373	(A,89,41) Inductor	CTF1379
L 374	(A,85,42) Inductor	CTF1379
L 376	(A,85,45) Inductor	CTF1379
L 377	(A,89,45) Inductor	CTF1379
L 378	(A,85,44) Inductor	CTF1379
L 471	(A,142,125)Choke Coil 600 µH	CTH1221
L 504	(A,148,66) Inductor	CTF1295
L 505	(A,156,98)	LAU330J
L 507	(A,147,55) Chip Coil	LCTAW4R7J2520
L 508	(A,152,36) Inductor	CTF1295
L 601	(A,55,11) Inductor	CTF1295
L 701	(A,43,65) Inductor	LCTAW150J2520
X 351	(A,119,48) Radiator 33.8688 MHz	CSS1600
X 701	(A,49,56) Radiator 10.0 MHz	CSS1577
⚠FU471	(A,56,114) Fuse 8 A	CEK1263
	(A,162,89) FM/AM Tuner Unit	CWE1832
AR501	(A,159,103) Surge Protector	IMSA-6801-01Y901

RESISTORS

Circuit Symbol and No.		Part No.
R 121	(A,99,73)	RS1/16S221J
R 122	(A,101,73)	RS1/16S221J
R 123	(A,93,60)	RS1/16SS221J
R 124	(A,93,61)	RS1/16SS221J
R 125	(A,93,63)	RS1/16SS221J
R 126	(B,94,61)	RS1/16S473J
R 129	(A,93,66)	RS1/16SS221J
R 130	(A,93,67)	RS1/16SS221J
R 205	(A,63,70)	RS1/16S273J
R 206	(A,68,75)	RS1/16S273J
R 207	(A,67,71)	RS1/16S223J
R 208	(A,66,75)	RS1/16S273J
R 209	(A,60,70)	RS1/16S273J
R 210	(A,56,68)	RS1/16S223J
R 211	(A,69,77)	RS1/16S223J
R 212	(A,68,77)	RS1/16S223J
R 213	(A,62,99)	RS1/16S473J
R 214	(A,62,94)	RS1/16S473J
R 215	(A,62,101)	RS1/16S473J
R 216	(A,62,96)	RS1/16S473J
R 217	(A,69,103)	RS1/16S183J
R 218	(A,68,92)	RS1/16S183J
R 219	(A,73,99)	RS1/16S183J
R 220	(A,73,97)	RS1/16S183J
R 221	(A,57,78)	RS1/16S102J
R 222	(A,57,77)	RS1/16S102J
R 301	(A,132,67)	RS1/16S102J
R 302	(A,132,72)	RS1/16S102J
R 309	(A,135,67)	RS1/16S102J
R 310	(A,135,71)	RS1/16S102J
R 315	(A,132,75)	RS1/16S102J
R 316	(A,132,79)	RS1/16S102J
R 323	(A,134,76)	RS1/16S102J
R 324	(A,134,80)	RS1/16S102J
R 328	(B,67,94)	RS1/16S472J
R 329	(B,73,93)	RS1/16S472J
R 351	(A,83,39)	RS1/16SS221J
R 352	(A,83,44)	RS1/16SS221J
R 353	(A,83,46)	RS1/16SS221J
R 354	(A,83,45)	RS1/16SS221J
R 356	(A,83,41)	RS1/16SS221J
R 357	(A,83,43)	RS1/16SS221J
R 358	(A,83,40)	RS1/16SS221J
R 361	(A,115,48)	RS1/16S105J
R 362	(A,115,50)	RS1/16S331J
R 363	(B,95,44)	RS1/16S0R0J
R 364	(A,97,43)	RS1/16S0R0J
R 365	(B,97,44)	RS1/16S0R0J
R 366	(A,99,43)	RS1/16S0R0J
R 373	(A,93,43)	RS1/16S0R0J
R 374	(A,102,43)	RS1/16S0R0J
R 403	(A,54,117)	RS1/16S153J
R 404	(A,54,120)	RS1/16S473J
R 405	(B,103,119)	RS1/10S472J
R 406	(A,60,124)	RS1/4S182J
R 407	(A,78,105)	RS1/16S153J
R 408	(A,75,107)	RS1/16S473J
R 409	(B,108,128)	RS1/10S472J
R 410	(A,79,115)	RS1/4S182J
R 412	(A,51,112)	RS1/16S104J
R 414	(A,54,111)	RS1/16S224J
R 415	(A,51,117)	RS1/16S104J
R 416	(A,49,116)	RS1/16S104J
R 421	(A,36,85)	RS1/16S182J
R 422	(B,47,81)	RS1/16S182J
R 423	(B,44,80)	RS1/16S103J
R 424	(A,34,84)	RS1/16S562J
R 425	(A,36,98)	RS1/16S471J
R 426	(A,35,72)	RS1/16S102J
R 433	(A,14,38)	RS1/16S101J
R 434	(A,12,43)	RS1/16S221J
R 435	(A,15,35)	RS1/8S221J
R 436	(A,12,40)	RS1/16S471J
R 439	(B,6,58)	RS1/16S223J
R 440	(A,19,39)	RS1/16S472J
R 441	(B,20,76)	RS1/16S820J
R 443	(B,12,82)	RS1/16S471J

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
R 444	(B,16,84)	RS1/16S221J	R 719	(A,58,17)	RS1/16S221J
R 445	(B,14,82)	RS1/10S271J	R 720	(A,61,17)	RS1/16S101J
R 447	(B,7,84)	RS1/16S223J	R 721	(A,36,53)	RS1/16S0R0J
R 448	(B,18,78)	RS1/16S472J	R 722	(A,59,17)	RS1/16S101J
R 451	(A,64,107)	RS1/16S472J	R 723	(A,56,17)	RS1/16S101J
R 452	(A,61,110)	RS1/16S223J	R 726	(A,34,30)	RS1/16S102J
R 455	(A,82,99)	RS1/16S102J	R 727	(A,38,28)	RS1/16S102J
R 456	(A,85,100)	RS1/16S223J	R 728	(A,39,30)	RS1/16S102J
R 457	(A,87,93)	RS1/10S331J	R 732	(A,43,31)	RS1/16S102J
R 458	(A,82,117)	RS1/16S913J	R 735	(A,45,28)	RS1/16S102J
R 459	(A,81,106)	RS1/16S100J	R 736	(A,48,30)	RS1/16S102J
R 471	(A,60,114)	RS1/4S101J	R 737	(A,50,29)	RS1/16S473J
R 472	(A,39,129)	RS1PMF680J	R 738	(A,56,30)	RS1/16S102J
R 473	(B,19,120)	RS1/16S102J	R 739	(A,61,51)	RS1/16SS102J
R 484	(A,32,121)	RS1/10S102J	R 740	(A,52,32)	RS1/16S473J
R 514	(B,160,67)	RS1/16S681J	R 741	(A,52,31)	RS1/16S473J
R 515	(B,156,57)	RS1/16S681J	R 742	(A,54,30)	RS1/16S104J
R 516	(B,158,69)	RS1/16S681J	R 743	(A,64,36)	RS1/16SS102J
R 517	(B,158,71)	RS1/16S681J	R 744	(A,66,37)	RS1/16SS102J
R 518	(B,158,73)	RS1/16S681J	R 745	(A,64,38)	RS1/16SS102J
R 519	(B,158,78)	RS1/16S681J	R 746	(A,66,38)	RS1/16SS0R0J
R 520	(B,158,80)	RS1/16S681J	R 747	(A,64,39)	RS1/16SS0R0J
R 521	(B,140,24)	RS1/16S223J	R 748	(A,66,40)	RS1/16SS0R0J
R 522	(B,140,22)	RS1/16S223J	R 749	(A,64,41)	RS1/16SS0R0J
R 523	(B,140,26)	RS1/16S223J	R 750	(A,66,41)	RS1/16SS471J
R 524	(B,140,20)	RS1/16S223J	R 751	(A,63,42)	RS1/16SS473J
R 525	(B,140,28)	RS1/16S103J	R 752	(A,66,43)	RS1/16SS102J
R 526	(A,154,30)	RS1/16S471J	R 753	(A,64,44)	RS1/16SS332J
R 529	(B,159,86)	RS1/16S0R0J	R 759	(A,63,49)	RS1/16SS102J
R 530	(A,141,57)	RS1/16S223J	R 760	(A,65,49)	RS1/16SS102J
R 531	(A,139,58)	RS1/16S222J	R 761	(A,64,52)	RS1/16SS102J
R 604	(B,167,11)	RS1/16S472J	R 762	(A,61,53)	RS1/16SS102J
R 605	(B,167,13)	RS1/16S472J	R 763	(A,96,22)	RS1/16S682J
R 631	(A,159,22)	RS1/16S103J	R 764	(A,93,22)	RS1/16S682J
R 653	(A,17,112)	RS1/16S473J	R 765	(A,83,38)	RS1/16SS103J
R 655	(B,43,112)	RS1/16S472J	R 767	(A,70,39)	RS1/16SS472J
R 656	(B,40,115)	RS1/16S473J	R 768	(A,71,41)	RS1/16SS472J
R 657	(B,45,113)	RS1/16S103J	R 769	(A,70,42)	RS1/16SS472J
R 671	(A,150,21)	RS1/16S272J	R 771	(A,71,50)	RS1/16SS152J
R 672	(A,150,17)	RS1/16S272J	R 772	(A,67,50)	RS1/16SS152J
R 673	(A,150,19)	RS1/16S472J	R 773	(B,47,89)	RS1/16S103J
R 674	(A,150,16)	RS1/16S472J	R 774	(B,15,113)	RS1/16S432J
R 675	(A,136,16)	RS1/16S392J	R 775	(B,15,111)	RS1/16S152J
R 676	(A,141,20)	RS1/16S392J	R 780	(A,58,31)	RS1/16S473J
R 677	(A,134,16)	RS1/16S681J	R 782	(A,78,21)	RS1/16S104J
R 678	(A,140,22)	RS1/16S681J	R 783	(A,36,113)	RS1/4S101J
R 702	(A,61,56)	RS1/16SS102J	R 784	(A,39,113)	RS1/4S101J
R 703	(A,59,57)	RS1/16SS102J	R 787	(A,30,34)	RS1/16S1R0J
R 704	(A,57,57)	RS1/16SS102J	R 788	(A,37,36)	RS1/16S1R0J
R 705	(A,62,58)	RS1/16SS102J	R 791	(A,60,23)	RS1/16S473J
R 709	(A,46,56)	RS1/16SS473J	R 795	(A,50,34)	RS1/16SS273J
R 710	(A,65,33)	RS1/16SS471J	R 796	(A,52,34)	RS1/16SS102J
R 711	(A,66,35)	RS1/16SS102J	R 801	(A,149,134)	RS1/16S103J
R 712	(A,62,36)	RS1/16SS102J	R 802	(A,109,116)	RS1/16S103J
R 713	(A,43,68)	RS1/16S102J	R 803	(A,109,113)	RS1/16S331J
R 714	(A,72,28)	RS1/16S102J	R 804	(A,108,106)	RS1/16S103J
R 715	(A,73,26)	RS1/16S102J	R 805	(A,108,118)	RS1/16S222J
R 716	(A,73,24)	RS1/16S102J	R 806	(A,103,112)	RS1/16S103J
R 717	(A,73,23)	RS1/16S102J	R 807	(A,132,65)	RS1/16S125J
R 718	(A,55,17)	RS1/16S221J	R 808	(A,132,69)	RS1/16S125J

Circuit Symbol and No.		Part No.
R 809	(A,104,118)	RS1/16S223J
R 810	(A,103,115)	RS1/16S104J
R 811	(A,111,111)	RS1/16S103J
R 812	(A,111,113)	RS1/16S223J
R 815	(A,132,92)	RS1/10S681J
R 816	(A,124,91)	RS1/16S473J
R 817	(B,65,109)	RS1/16S473J
R 818	(A,122,100)	RS1/16S473J
R 819	(A,124,100)	RS1/16S473J
R 833	(A,110,100)	RS1/16S0R0J
R 834	(A,126,95)	RS1/16S0R0J
R 851	(B,14,89)	RS1/16S472J
R 852	(B,7,96)	RS1/16S223J
R 853	(A,15,96)	RS1/10S821J
R 854	(B,16,91)	RS1/16S181J
R 855	(B,12,97)	RS1/16S471J
R 856	(B,17,100)	RS1/16S151J
R 999	(B,101,12)	RS1/16S122J
R 1703	(B,13,105)	RS1/16S473J
R 1704	(A,59,59)	RS1/16S0R0J
R 1705	(A,66,61)	RS1/16SS0R0J
R 1707	(A,95,22)	RS1/16S682J
R 1708	(A,90,11)	RS1/16S473J
R 1709	(A,98,22)	RS1/16S682J
R 1710	(A,45,69)	RS1/16S472J
R 1711	(A,45,68)	RS1/16S472J

CAPACITORS

C 205	(A,64,75)	CSZS1R0M16
C 206	(A,62,75)	CSZS1R0M16
C 207	(A,65,71)	CCSRCH150J50
C 208	(A,57,68)	CCSRCH150J50
C 209	(A,67,66)	CKSRYB473K50
C 213	(A,58,99)	CSZS3R3M16
C 214	(A,58,94)	CSZS3R3M16
C 215	(A,58,101)	CSZS3R3M16
C 216	(A,58,96)	CSZS3R3M16
C 217	(A,69,104)	CCSRCH150J50
C 218	(A,68,91)	CCSRCH150J50
C 219	(A,65,100)	CKSRYB473K50
C 307	(A,134,64)	CKSRYB102K50
C 308	(A,134,69)	CKSRYB102K50
C 309	(A,136,64)	CKSRYB102K50
C 310	(A,135,69)	CKSRYB102K50
C 321	(A,134,73)	CKSRYB102K50
C 322	(A,134,78)	CKSRYB102K50
C 323	(A,135,73)	CKSRYB102K50
C 324	(A,135,78)	CKSRYB102K50
C 327	(A,122,70)	CSZSR220M10
C 328	(A,115,72)	CSZSR220M10
C 329	(B,75,93)	CKSRYB104K50
C 330	(A,119,57)	CSZSR220M10
C 333	(A,93,40)	CKSRYB105K10
C 334	(A,102,40)	CKSRYB105K10
C 337	(A,76,92)	CEVLW470M6R3
C 339	(A,108,41)	CSZSR220M10
C 340	(A,108,74)	CKSRYB104K50
C 345	(B,107,49)	CKSRYB222K50
C 351	(B,93,44)	CKSRYB105K10
C 352	(A,96,43)	CKSRYB105K10
C 353	(B,95,40)	CKSRYB105K10
C 354	(A,97,40)	CKSRYB105K10
C 355	(B,97,40)	CKSRYB105K10
C 356	(A,98,40)	CKSRYB105K10
C 358	(B,103,47)	CKSRYB102K50
C 359	(B,103,49)	CKSRYB222K50
C 360	(A,104,42)	CSZSR220M10
C 362	(B,107,47)	CKSRYB102K50
C 363	(A,113,42)	CSZSR220M10
C 364	(A,115,47)	CCSRCH100D50
C 365	(A,123,49)	CCSRCH100D50
C 366	(B,111,50)	CKSRYB103K50
C 368	(A,123,52)	CKSRYB104K50
C 371	(B,112,55)	CKSRYB104K50
C 372	(A,125,56)	CKSQYB475K6R3
C 373	(B,108,56)	CKSRYB104K50
C 374	(A,124,61)	CKSQYB475K6R3
C 375	(B,111,59)	CKSRYB104K50
C 376	(A,124,63)	CKSQYB475K6R3
C 377	(A,122,66)	CSZSC101M10
C 380	(B,109,62)	CKSRYB104K50
C 381	(A,126,72)	CKSQYB475K6R3
C 384	(B,111,65)	CKSRYB104K50
C 385	(B,114,63)	CKSRYB222K50
C 386	(A,103,86)	CKSRYB104K50
C 387	(A,111,86)	CKSRYB105K10
C 388	(A,109,92)	CKSRYB104K50
C 390	(A,105,76)	CKSRYB104K50
C 393	(B,101,54)	CKSRYB104K50
C 397	(A,92,49)	CKSRYB104K50
C 398	(A,93,49)	CKSRYB222K50
C 399	(B,114,69)	CKSRYB222K50
C 401	(B,60,122)	CKSRYB103K50
C 402	(A,59,119)	CEAL2R2M50
C 403	(A,80,111)	CKSRYB103K50
C 404	(A,74,110)	CEVLW2R2M50
C 408	(B,60,125)	CKSQYB103K50
C 409	(A,52,120)	CKSRYB103K50
C 420	(A,31,75) 470 µF/16 V	CCH1459(P35)
C 421	(A,30,86)	CEAL220M16
C 422	(B,29,73)	CKSRYB103K50
C 423	(B,40,83)	CKSRYB103K50
C 424	(A,41,80)	CEJQ101M10
C 425	(B,39,86)	CKSRYB103K50
C 427	(A,31,66) 470 µF/16 V	CCH1459(P35)
C 428	(A,36,96)	CKSRYB104K50
C 432	(B,24,63)	CKSRYB473K50
C 433	(A,21,62)	CEHAZA101M16
C 434	(A,17,45)	CKSRYB103K50
C 442	(B,21,86)	CKSRYB473K50
C 443	(A,24,86)	CEHAZA101M16
C 444	(B,18,81)	CKSRYB103K50
C 461	(A,83,95)	CKSRYB103K50
C 462	(B,22,133)	CKSQYB102K50
C 463	(B,27,133)	CKSQYB102K50
C 469	(B,30,122)	CKSQYB221K50
C 470	(B,27,122)	CKSQYB221K50
C 471	(A,120,124) 3 300 µF/16 V	CCH1486(P45)
C 472	(B,92,130)	CKSQYB183K50

Circuit Symbol and No.		Part No.
C 473	(B,84,130)	CKSQYB183K50
C 474	(B,82,130)	CKSQYB183K50
C 475	(A,67,121)	CKSQYB183K50
C 476	(B,89,130)	CKSQYB183K50
C 477	(B,87,130)	CKSQYB183K50
C 478	(B,79,130)	CKSQYB183K50
C 479	(B,63,127)	CKSQYB183K50
C 480	(A,86,117)	CKSQYB102K50
C 481	(A,64,112)	CKSQYB393K50
C 484	(B,32,122)	CKSQYB221K50
C 485	(B,35,122)	CKSQYB221K50
C 486	(B,43,121)	CKSQYB222K50
C 487	(B,46,121)	CKSQYB222K50
C 488	(B,48,121)	CKSQYB222K50
C 489	(B,52,122)	CKSQYB222K50
C 490	(B,52,118)	CKSQYB473K50
C 491	(A,19,117)	CKSQYB103K50
C 496	(A,28,121)	CKSQYB102K50
C 507	(A,149,71)	CEJQ101M10
C 509	(B,165,82)	CKSRYB103K50
C 519	(A,171,54)	CEJQ470M10
C 520	(B,162,56)	CKSRYB103K50
C 521	(A,171,46)	CEJQ470M10
C 522	(B,165,45)	CKSRYB103K50
C 523	(A,146,27)	CEJQ101M10
C 524	(B,147,24)	CKSRYB103K50
C 525	(A,148,32)	CKSRYB105K10
C 526	(A,134,40)	CKSYB335K16
C 527	(A,147,63)	CKSRYB103K50
C 613	(A,58,9)	CKSRYB105K10
C 671	(A,153,23)	CKSRYB332K50
C 672	(A,153,14)	CKSRYB332K50
C 683	(A,145,20)	CKSRYB105K10
C 684	(A,145,19)	CKSRYB105K10
C 685	(A,131,17)	CKSRYB822K25
C 686	(A,136,20)	CKSRYB822K25
C 687	(A,134,15)	CKSRYB823K25
C 688	(A,139,20)	CKSRYB823K25
C 689	(A,102,24)	CKSYB104K50
C 707	(B,15,109)	CKSRYB224K16
C 713	(A,47,66)	CSZS100M16
C 714	(A,47,64)	CKSRYB103K50
C 781	(A,46,73)	CKSRYB104K50
C 782	(A,53,64)	CKSRYB223K50
C 783	(A,37,66)	CKSRYB105K10
C 801	(A,138,65)	CFTNA224J50
C 802	(A,138,70)	CFTNA224J50
C 803	(A,138,74)	CFTNA224J50
C 804	(A,138,79)	CFTNA224J50
C 805	(B,149,135)	CKSQYB104K50
C 806	(A,140,102)	CFTNA105J50
C 807	(A,132,96)	CEVLW100M16
C 808	(A,151,131)	CEHAT1R0M50
C 809	(A,132,103)	CEVLW330M10
C 812	(B,121,86)	CKSRYB473K50
C 851	(B,12,91)	CKSRYB103K50
C 852	(A,21,101)	CEHAZA101M16
C 853	(B,24,98)	CKSRYB473K50

B

Unit Number:
Unit Name : Keyboard Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 901	(B,130,78) IC	UPD16432B-027
Q 971	(B,50,58) Transistor	2SC4081
Q 972	(B,38,51) Transistor	2SB1132
Q 981	(B,56,56) Transistor	DTC143EUA
Q 982	(B,36,62) Transistor	2SB1198K
D 901	(B,135,62) Diode	1SS355
D 902	(B,136,59) Diode	1SS355
D 903	(B,146,54) Diode	UDZS6R2(B)
D 906	(B,66,86) Diode	1SS355
D 907	(B,70,79) Diode	1SS355
D 908	(B,72,79) Diode	1SS355
D 909	(B,74,79) Diode	1SS355
D 910	(B,76,79) Diode	1SS355
D 911	(B,78,79) Diode	1SS355
D 912	(B,80,79) Diode	1SS355
D 921	(A,102,28) LED	SML-310FC(KL)
D 922	(A,111,13) LED	SML-310FC(KL)
D 923	(A,136,28) LED	SML-310FC(KL)
D 924	(A,128,42) LED	SML-310FC(KL)
D 925	(A,57,38) LED	SML-310FC(KL)
D 926	(A,201,38) LED	SML-310FC(KL)
D 932	(A,111,42) LED	SML-310FC(KL)
D 933	(A,47,38) LED	SML-310FC(KL)
D 934	(A,37,38) LED	SML-310FC(KL)
D 936	(A,128,13) LED	SML-310FC(KL)
D 937	(A,191,38) LED	SML-310FC(KL)
D 938	(A,181,38) LED	SML-310FC(KL)
D 939	(A,218,17) LED	SML-310FC(KL)
D 940	(A,207,17) LED	SML-310FC(KL)
D 941	(A,182,17) LED	SML-310FC(KL)
D 942	(A,178,17) LED	SML-310FC(KL)
D 943	(A,61,17) LED	SML-310FC(KL)
D 944	(A,57,17) LED	SML-310FC(KL)
D 945	(A,30,17) LED	SML-310FC(KL)
D 946	(A,25,17) LED	SML-310FC(KL)
D 947	(A,176,64) LED	SML-310FC(KL)
D 948	(A,175,64) LED	SML-310FC(KL)
D 949	(A,154,64) LED	SML-310FC(KL)
D 950	(A,152,64) LED	SML-310FC(KL)
D 951	(A,131,64) LED	SML-310FC(KL)
D 952	(A,130,64) LED	SML-310FC(KL)
D 953	(A,109,64) LED	SML-310FC(KL)
D 954	(A,107,64) LED	SML-310FC(KL)
D 955	(A,86,64) LED	SML-310FC(KL)
D 956	(A,85,64) LED	SML-310FC(KL)
D 957	(A,64,64) LED	SML-310FC(KL)
D 958	(A,63,64) LED	SML-310FC(KL)
D 959	(A,210,84) LED	SML-310FC(KL)
D 960	(A,201,84) LED	SML-310FC(KL)
D 961	(A,25,80) LED	SML-310FC(KL)
D 962	(A,34,80) LED	SML-310FC(KL)
D 963	(A,35,91) LED	SML-310FC(KL)
D 964	(A,24,91) LED	SML-310FC(KL)
D 965	(A,210,109) LED	SML-310FC(KL)
D 966	(A,206,110) LED	SML-310FC(KL)

Circuit Symbol and No.		Part No.
D 967	(A,188,113) LED	SML-310FC(KL)
D 968	(A,29,109) LED	SML-310FC(KL)
D 969	(A,33,110) LED	SML-310FC(KL)
D 970	(A,51,113) LED	SML-310FC(KL)
D 981	(A,48,94) LED	GG1171F-633
D 982	(A,48,90) LED	GG1171F-633
D 983	(A,48,85) LED	GG1171F-633
D 984	(A,190,85) LED	GG1171F-633
D 985	(A,190,90) LED	GG1171F-633
D 986	(A,190,94) LED	GG1171F-633
D 987	(A,48,81) LED	GG1171F-633
D 988	(A,48,76) LED	GG1171F-633
D 989	(A,190,76) LED	GG1171F-633
D 990	(A,190,81) LED	GG1171F-633
S 940	(A,119,28) Encoder(PWR/VOL)	CSD1132
	LCD	CAW1943

RESISTORS

R 901	(B,129,64)	RS1/16S681J
R 902	(B,131,57)	RS1/16S473J
R 903	(B,149,50)	RS1/16S102J
R 904	(B,114,65)	RS1/16S102J
R 905	(B,115,65)	RS1/16S102J
R 906	(B,117,65)	RS1/16S102J
R 907	(B,118,65)	RS1/16S102J
R 908	(B,120,65)	RS1/16S104J
R 909	(B,122,64)	RS1/16S681J
R 910	(B,124,64)	RS1/16S221J
R 911	(B,125,64)	RS1/16S681J
R 912	(B,127,64)	RS1/16S102J
R 913	(B,131,63)	RS1/16S681J
R 914	(B,133,61)	RS1/16S472J
R 915	(B,112,65)	RS1/16S473J
R 916	(B,110,64)	RS1/16S473J
R 917	(B,110,65)	RS1/16S473J
R 918	(B,110,62)	RS1/16S473J
R 919	(B,110,61)	RS1/16S473J
R 921	(B,138,64)	RS1/16S102J
R 922	(B,139,66)	RS1/16S102J
R 923	(B,142,66)	RS1/16S102J
R 924	(B,143,62)	RS1/16S102J
R 925	(B,136,52)	RS1/16S1R0J
R 931	(B,105,44)	RS1/10S181J
R 932	(B,141,35)	RS1/10S181J
R 933	(B,69,44)	RS1/10S151J
R 934	(B,220,38)	RS1/10S221J
R 943	(B,178,37)	RS1/16S101J
R 944	(B,71,28)	RS1/16S101J
R 945	(B,154,61)	RS1/16S101J
R 946	(B,102,61)	RS1/16S101J
R 947	(B,56,65)	RS1/16S101J
R 948	(B,213,75)	RS1/10S151J
R 949	(B,213,80)	RS1/10S151J
R 950	(B,18,81)	RS1/16S101J
R 952	(B,214,93)	RS1/10S271J
R 954	(B,36,105)	RS1/10S271J
R 975	(B,51,49)	RS1/16S102J
R 976	(B,50,52)	RS1/16S473J
R 977	(B,44,57)	RS1/10S391J
R 978	(B,44,55)	RS1/10S391J
R 979	(B,45,50)	RS1/16S223J
R 981	(B,34,76)	RS1/10S181J
R 983	(B,178,89)	RS1/10S181J
R 985	(B,40,72)	RS1/10S151J
R 986	(B,35,71)	RS1/10S151J
R 988	(B,178,84)	RS1/10S151J
R 989	(B,178,86)	RS1/10S151J
R 995	(B,48,62)	RS1/16S332J
R 995	(A,32,19)	RS1/16S332J
R 996	(B,44,62)	RS1/16S223J
R 996	(A,30,19)	RS1/16S223J

CAPACITORS

C 901	(B,133,59)	CKSRYB474K10
C 902	(B,131,55)	CCSRCH101J50
C 903	(B,147,60)	CCSRCH101J50
C 904	(B,147,62)	CCSRCH101J50
C 905	(B,125,59)	CCSRCH101J50
C 906	(B,122,59)	CCSRCH101J50
C 907	(B,121,59)	CCSRCH101J50
C 908	(B,131,49)	CKSRYB104K50
C 909	(B,139,61)	CKSRYB104K50
C 910	(B,141,61)	CKSRYB104K50
C 911	(B,143,63)	CKSRYB104K50

C

Unit Number : CWX3303
Unit Name : CD Core Unit(S101WMA2)

MISCELLANEOUS

IC 201	(A,35,24)	IC	UPD63763AGJ
IC 203	(B,45,80)	IC	NJM2886DL3-33
IC 204	(B,33,26)	IC	MSM56V16160F8TKFM
IC 301	(A,46,86)	IC	BA5835FP
IC 701	(A,44,61)	IC	PE5528A
IC 703	(A,62,65)	IC	S-812C33AUA-C2N
Q 101	(A,19,22)	Transistor	2SA1577
Q 601	(B,57,42)	Transistor	IMH20
Q 603	(B,53,43)	Transistor	2SB709A
Q 701	(B,45,67)	Transistor	UN2111
D 101	(B,16,18)	Diode	1SS355
D 201	(A,59,53)	Diode	1SR154-400
D 202	(A,63,53)	Diode	1SR154-400
D 601	(B,57,38)	Diode	MA152WA
L 203	(A,51,32)	Inductor	CTF1389
L 207	(A,49,31)	Inductor	CTF1389
L 209	(A,22,21)	Inductor	CTF1389
L 703	(A,55,54)	Inductor	CTF1389
TH701	(A,19,34)	Thermistor	CCX1063
X 201	(A,48,35)	Ceramic Resonator 16.934 MHz	CSS1603
X 701	(A,56,61)	Ceramic Resonator 4.000 MHz	CSS1652
S 901	(A,14,41)	Switch(HOME)	CSN1067
S 902	(B,62,95)	Switch(CLAMP)	CSN1067
S 903	(B,52,98)	Switch(DSCSNS)	CSN1068
S 904	(B,34,107)	Switch(12EJ)	CSN1067
S 905	(B,47,108)	Switch(8EJ)	CSN1067

Circuit Symbol and No.		Part No.
RESISTORS		
R 101	(A,19,26)	RS1/10SR2R4J
R 102	(A,20,28)	RS1/10SR2R4J
R 103	(A,21,26)	RS1/10SR2R7J
R 201	(A,53,16)	RS1/16SS102J
R 202	(A,49,23)	RS1/16SS333J
R 216	(A,20,17)	RS1/16SS472J
R 221	(B,23,20)	RS1/16SS103J
R 222	(B,21,20)	RS1/16SS103J
R 225	(A,24,8)	RS1/16SS103J
R 226	(A,25,7)	RS1/16SS393J
R 227	(B,34,5)	RS1/16SS562J
R 228	(A,33,9)	RS1/16SS122J
R 229	(B,34,7)	RS1/16SS472J
R 232	(A,32,9)	RS1/16SS122J
R 241	(A,40,37)	RS1/16SS333J
R 243	(A,41,37)	RS1/16SS333J
R 245	(A,35,44)	RS1/16SS333J
R 267	(A,35,38)	RS1/16S0R0J
R 271	(A,30,37)	RS1/16SS121J
R 272	(A,25,9)	RS1/16S0R0J
R 301	(A,47,76)	RS1/16SS183J
R 302	(A,43,75)	RS1/16SS822J
R 304	(A,48,75)	RS1/16SS183J
R 305	(A,44,72)	RS1/16SS822J
R 307	(A,36,82)	RS1/16SS183J
R 308	(A,33,83)	RS1/16SS183J
R 309	(A,37,86)	RS1/16SS183J
R 310	(A,35,87)	RS1/16SS183J
R 601	(B,64,21)	RS1/16S101J
R 602	(B,54,28)	RS1/16S101J
R 603	(B,63,23)	RS1/16S223J
R 604	(B,54,30)	RS1/16S223J
R 605	(B,52,46)	RS1/16SS103J
R 606	(B,62,27)	RS1/16S0R0J
R 703	(B,51,70)	RS1/16SS104J
R 704	(B,51,72)	RS1/16SS104J
R 705	(B,50,69)	RS1/16SS221J
R 706	(B,50,71)	RS1/16SS221J
R 707	(B,50,57)	RS1/16SS473J
R 708	(B,42,70)	RS1/16SS221J
R 710	(B,30,70)	RS1/16SS102J
R 711	(B,39,62)	RS1/16SS221J
R 714	(B,47,60)	RS1/16SS473J
R 716	(A,51,70)	RS1/16SS472J
R 719	(A,41,51)	RS1/16SS221J
R 720	(B,39,64)	RS1/16SS471J
R 724	(B,32,65)	RN1/16SE3902D
R 726	(B,55,55)	RS1/16SS103J
R 727	(B,47,62)	RS1/16SS473J
R 729	(A,51,49)	RS1/16SS223J
R 730	(A,56,51)	RS1/16SS473J
R 731	(B,37,69)	RS1/16SS104J
R 733	(B,40,70)	RS1/16SS104J
R 735	(A,35,75)	RS1/16SS473J
R 737	(A,44,51)	RS1/16SS104J
R 740	(B,33,41)	RS1/16SS473J
R 742	(B,55,56)	RS1/16SS104J
R 745	(B,63,36)	RS1/16SS102J
R 746	(A,61,73)	RS1/16SS104J
R 750	(A,33,75)	RS1/16SS473J
R 754	(B,60,46)	RS1/16SS102J
R 755	(A,40,73)	RS1/16SS222J
R 756	(B,53,71)	RS1/16SS104J
R 765	(A,39,51)	RAB4CQ221J
R 769	(A,36,50)	RAB4CQ221J
R 773	(A,34,53)	RAB4CQ221J
R 777	(B,36,56)	RS1/16SS221J
R 778	(B,35,60)	RS1/16SS221J
R 779	(B,35,59)	RS1/16SS221J
R 781	(B,63,40)	RS1/16SS221J
R 782	(A,56,66)	RS1/16SS104J
R 783	(B,58,54)	RS1/16SS102J
R 784	(B,50,65)	RS1/16SS473J
R 785	(B,54,67)	RS1/16SS0R0J
R 786	(B,52,65)	RS1/16SS221J
R 787	(B,48,64)	RS1/16SS221J
R 788	(B,55,57)	RS1/16SS0R0J
R 901	(B,48,65)	RS1/16SS221J
R 904	(B,63,37)	RS1/16SS221J
R 905	(A,53,24)	RS1/16S0R0J
CAPACITORS		
C 103	(B,13,7) 100 µF/16 V	CCH1504
C 105	(A,18,14)	CKSSYB104K10
C 108	(B,36,14)	CKSSYB104K10
C 110	(A,19,9)	CKSSYB104K10
C 201	(A,52,14)	CKSSYB102K50
C 202	(A,47,14)	CKSSYB104K10
C 203	(A,49,30)	CKSSYB104K10
C 204	(B,38,42) 22 µF/6.3 V	CCH1507
C 205	(A,48,26)	CKSSYB104K10
C 206	(B,43,24)	CKSSYB103K16
C 208	(B,44,31)	CKSSYB104K10
C 209	(A,50,33)	CKSSYB104K10
C 216	(A,23,7)	CKSSYB332K50
C 217	(A,25,11)	CKSSYB104K10
C 218	(A,23,6)	CKSSYB473K10
C 219	(A,30,9)	CKSSYB104K10
C 220	(A,28,9)	CKSSYB182K50
C 221	(A,31,9)	CKSSYB104K10
C 222	(A,34,8)	CCSSCH560J50
C 223	(B,33,7)	CCSSCH4R0C50
C 224	(A,37,11)	CKSSYB104K10
C 225	(B,39,14)	CKSSYB103K16
C 226	(B,40,12)	CCSSCH680J50
C 227	(A,44,8)	CCSSCH470J50
C 228	(A,45,10)	CKSSYB103K16
C 232	(B,39,74)	CKSQYB475K6R3
C 234	(B,35,80)	CEVW221M4
C 235	(B,44,72)	CKSRYB474K10
C 237	(A,34,39)	CKSSYB104K10
C 239	(A,33,7)	CCSSCH220J50
C 242	(A,51,35)	CKSSYB104K10
C 246	(A,22,19)	CKSSYB104K10
C 250	(B,23,22)	CKSRYB102K50
C 251	(B,20,22)	CKSRYB102K50
C 254	(A,45,37)	CKSRYB105K10

Circuit Symbol and No.			Part No.
C 260	(A,49,28)		CKSSYB104K10
C 266	(B,34,14)		CKSSYB104K10
C 267	(B,35,38)		CKSSYB104K10
C 268	(B,25,29)		CKSSYB104K10
C 270	(B,25,27)		CKSSYB104K10
C 271	(B,41,30)		CKSSYB104K10
C 273	(B,41,28)		CKSSYB104K10
C 301	(A,46,75)		CKSSYB221K50
C 302	(A,47,74)		CKSSYB221K50
C 303	(A,34,82)		CKSSYB472K25
C 304	(A,36,87)		CKSSYB103K16
C 305	(B,32,92)		CEVW101M16
C 307	(A,55,85)		CKSSYB104K10
C 601	(B,63,25)		CCSRCH102J50
C 602	(B,53,30)		CCSRCH102J50
C 603	(B,59,21)	4.7 µF/25 V	CCH1592
C 604	(B,58,27)	4.7 µF/25 V	CCH1592
C 701	(B,52,57)		CKSSYB104K10
C 703	(B,58,56)		CKSSYB472K25
C 706	(A,46,71)		CKSSYB104K10
C 707	(A,34,58)		CKSSYB104K10
C 709	(A,24,37)		CKSSYB103K16
C 712	(A,61,60)		CKSRYB224K16
C 714	(A,54,58)		CKSSYB104K10
C 716	(A,51,51)		CKSSYB103K16
C 721	(B,54,39)		CCSRCH101J50
C 722	(B,51,60)		CKSQYB475K6R3
C 723	(A,61,71)		CKSRYB105K10
C 906	(A,64,34)		CKSRYB224K16

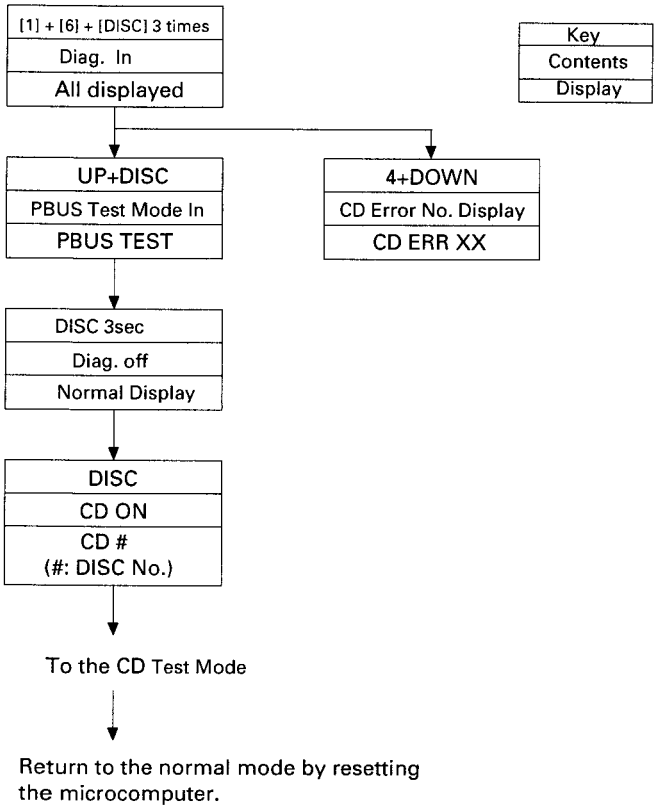
Miscellaneous Parts List

	Pickup Unit(P10)(Service)	CXX1856
M 1	Motor Unit(SPINDLE)	CXB6007
M 2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT

6.1 TEST MODE

● How to enter the CD Test Mode



6.2 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3 V) is used for the regulator. The reference voltage is the REFO1 (1.65 V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

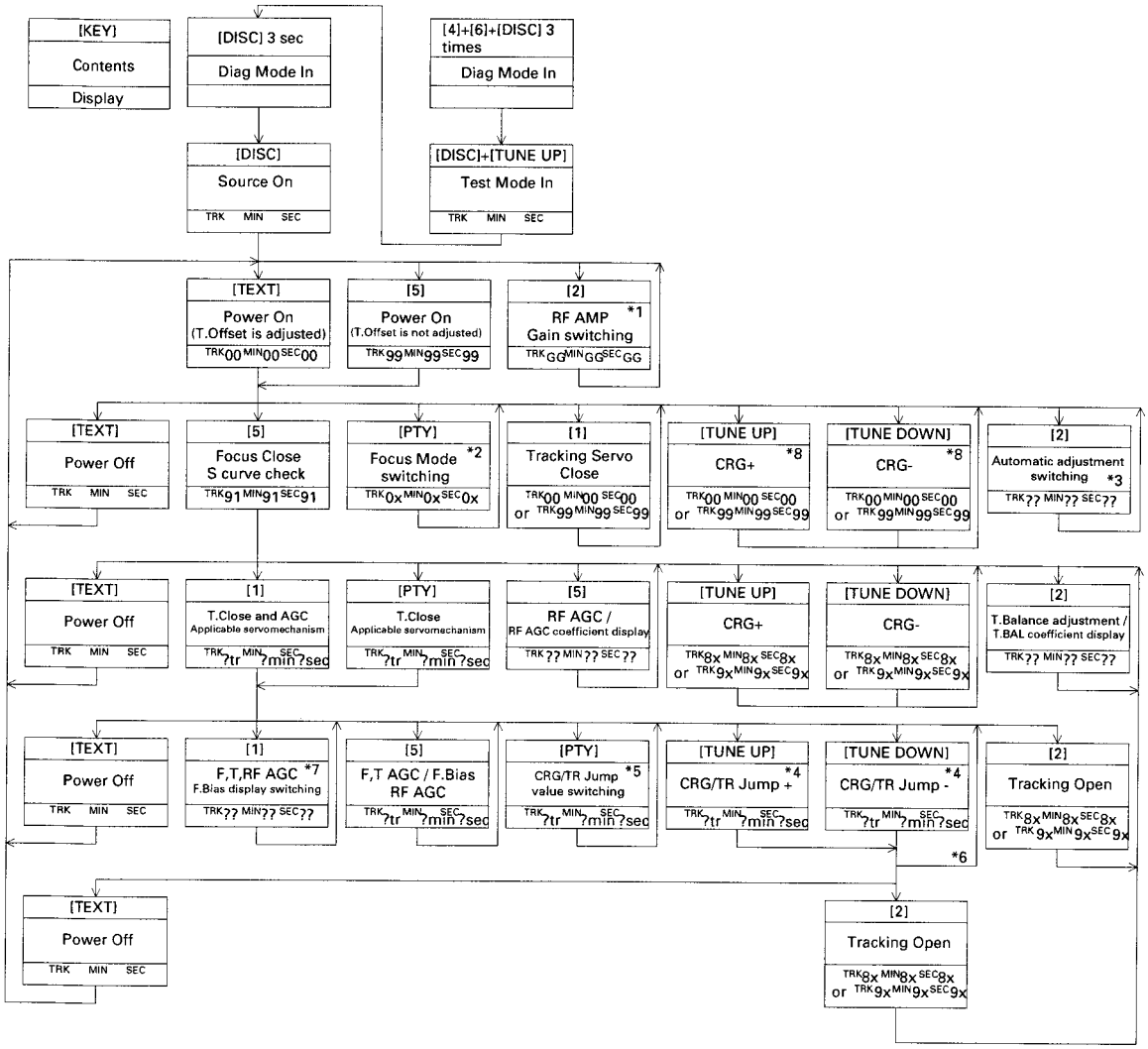
• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.
• To enter the test mode.
Refer the page 48.
• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (TUNE UP) key or (TUNE DOWN) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0 dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP (TRK MIN SEC) → -6 dB (TRK 06 MIN 06 SEC 06) → -12 dB (TRK 12 MIN 12 SEC 12) → TYP

*2) Focus Close (TRK 00 MIN 00 SEC 00 / TRK 99 MIN 99 SEC 99) → S.Curve check setting (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (TRK 02 MIN 02 SEC 02) → Focus Close

*3) F.Offset Display → T.Offset Display → Switch to the order of the original display

*4) 1TR / 32TR / 100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC → F.AGC → T.AGC → F Bias → RF AGC

*8) CRG motor voltage = 2 [V]

*9) Applicability : A, B, C, D, E, F
TYP(1X) (TRK MIN SEC) → 2X (TRK 22 MIN 22 SEC 22) → 1X (TRK 11 MIN 11 SEC 11) → TYP(1X)

As for the double speed (2x), audio output cannot be supported

Applicability : G
TYP(2X) (TRK MIN SEC) → 1X (TRK 11 MIN 11 SEC 11) → 2X (TRK 22 MIN 22 SEC 22) → TYP(2X)

[Key]	Operation
	Test Mode
[TEXT]	Power On / Off
[TUNE UP]	CRG + / TR Jump + (Direction of the external surface)
[TUNE DOWN]	CRG - / TR Jump - (Direction of the internal surface)
[1]	U.CLS and AGC and Applicable servomechanism / AGC, AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[5]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
[4]	SPDL 1X / 2X switching As for the double speed (2x), audio output cannot be supported.
[PTY]	F.Mode switching / Tracking Close / CRG • TR Jump switching

6.3 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

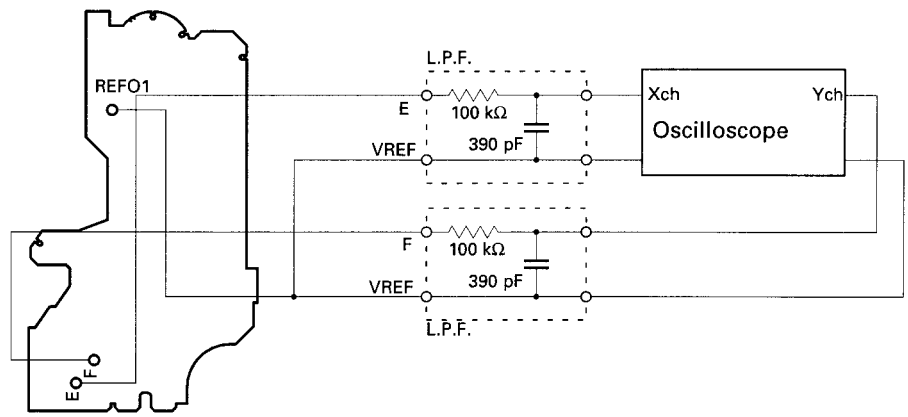
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• TCD-782
• Mode	• TEST MODE

CD CORE UNIT(S101WMA2)



• **Checking Procedure**

1. In test mode, load the disc and switch the 3 V regulator on.
2. Using the TUNE UP and TUNE DOWN buttons, move the PU unit to the innermost track.
3. Press key 5 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 5. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

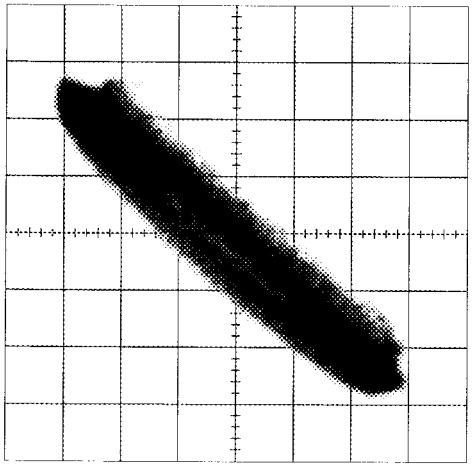
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

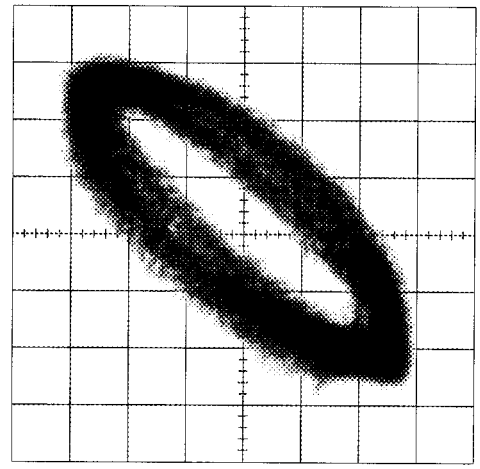
Grating waveform

Ech → Xch 20 mV/div, AC
Fch → Ych 20 mV/div, AC

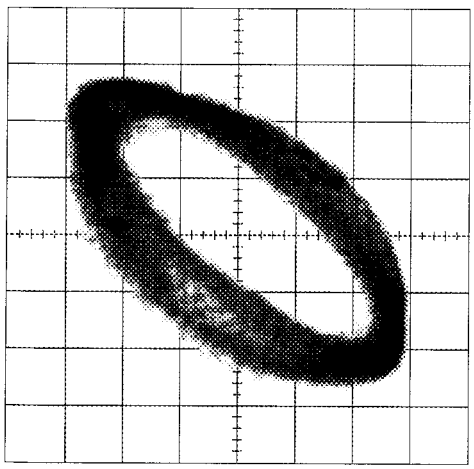
0°



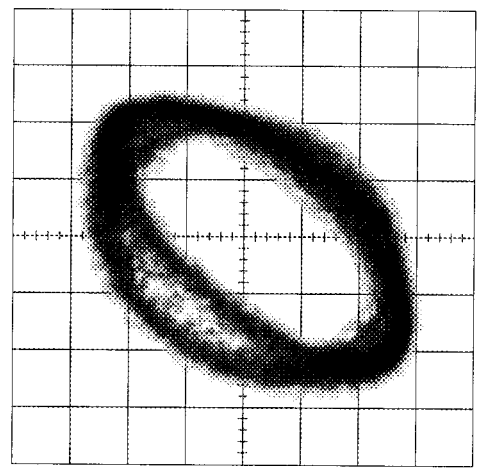
30°



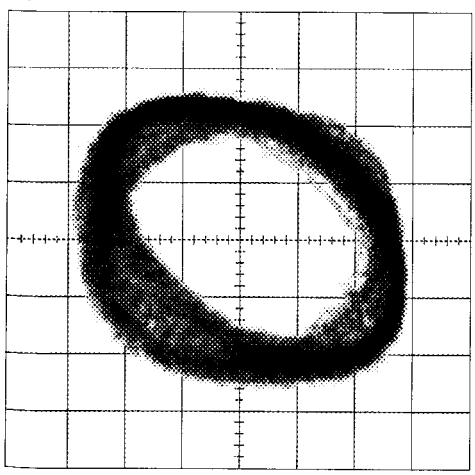
45°



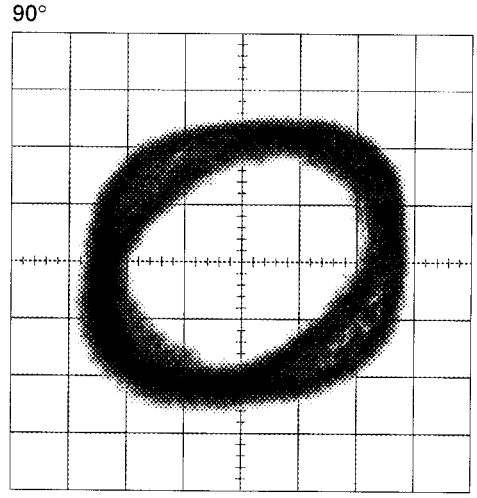
60°



75°



90°



6.4 ERROR MODE

● Error Messages

Error is displayed with number for Error cause when CD is inoperative or stops with Error during operation. The purpose is to reduce nonsense calls from users as well as to assist all related analysis and repair for defects at service station.

(1) Basic Display Method

1) When CSMOD (CD mode area for system) is SERRORM, Error code will be written in DMIN (minutes area for display), DSEC (seconds area for display). The same data shall be written in DMIN and DSEC. DTNO is blank as usual.

2) Display Example of Head Unit

The following is about LCD display ability. xx is Error number.

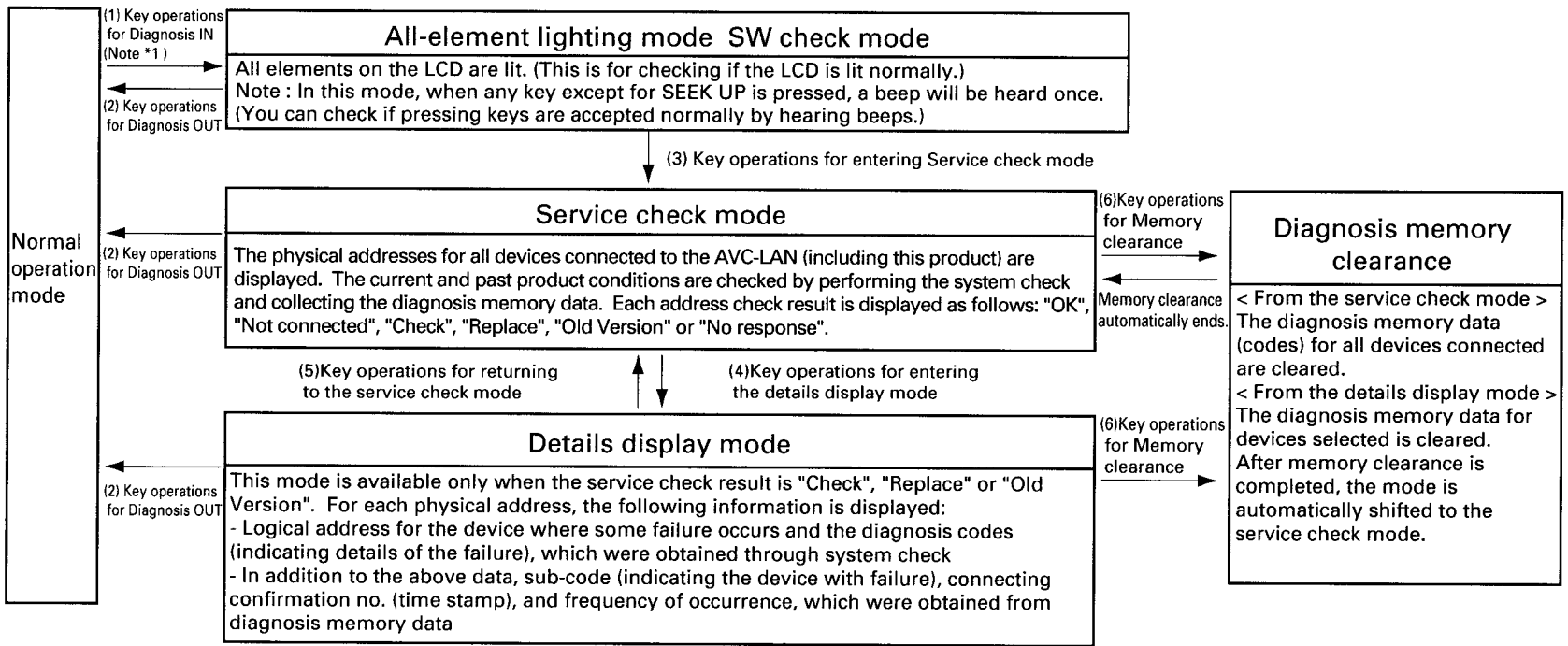
8 digits	6 digits	4 digits
ERROR–xx	ERR–xx OR Err–xx	E–xx

(2) Error Code List

No.	Classification	Contents	Details • Cause
10	Electricity	Carriage Home NG	CRG can't move to the inner. CRG can't move from the inner. → HOME SW failure, CRG movement failure.
11	Electricity	Focus Search NG	Focus can't be caught. → Back of Disc / Severe dirt and vibration.
12	Electricity	Spindle Lock NG Subcode NG RF-amp NG	Not spindle, lock. Wrong subcode (can't read). → Defective Spindle. Scratch and dirt on Disc. Intense vibration. The appropriate gain of the RF amp cannot be obtained. → Defective spindle. → Scratched or dirty disc. Severe vibration. Abnormal CD signals. → Blanc CD-R disc. Disc inserted upside down.
17	Electricity	Setup NG	AGC protection doesn't work, out of Focus soon. → Scratch on Disc/Severe dirt and vibration.
22	Disc	Impossible to play	There is no playable MP3 or WMA file present in a disc. → No MP3 or WMA file exists in a CD-ROM disc inserted.
23	Disc	File Format NG	Contents are stored in an incompatible file format. → The contents in a CD-ROM disc inserted are recorded in a file format other than ISO9660 Level-1 and 2.
30	Electricity	Search Time Out	Can't reach the target address. → Defective CRG/tracking, or scratch on Disc.
44	Disc	Impossible to play	There is no playable TRK No. present in a disc. → All TRK Nos. In a disc inserted are specified as a track which should be skipped, in the track skip information.
50	Mecha	Disc Load / Eject NG	Disc loading/ejection cannot be complete. → Foreign objects entered into the mechanism. Disc caught in between during loading/ejection.
A0	System	Power NG	Power supply (VD) isn't connected to the ground. → Defective SW transistor. Abnormal power (failed connector)

Note : Error doesn't display in mechanism only. (CD off causes mechanism off)
If TOC can't be read, error wouldn't occur, but mechanism still continues its operation.
The upper digits of error code is mainly classified by 3 kinds as follows:
1x: Setup related error, 3x: Search related error, Ax: Other errors.

●Operations and functions


Normal operation mode
(1) Key operations for Diagnosis IN (Note *1)
(2) Key operations for Diagnosis OUT
All-element lighting mode SW check mode
All elements on the LCD are lit. (This is for checking if the LCD is lit normally.)
Note : In this mode, when any key except for SEEK UP is pressed, a beep will be heard once. (You can check if pressing keys are accepted normally by hearing beeps.)
(3) Key operations for entering Service check mode
Service check mode
The physical addresses for all devices connected to the AVC-LAN (including this product) are displayed. The current and past product conditions are checked by performing the system check and collecting the diagnosis memory data. Each address check result is displayed as follows: "OK", "Not connected", "Check", "Replace", "Old Version" or "No response".
(6)Key operations for Memory clearance
Memory clearance automatically ends.
Diagnosis memory clearance
< From the service check mode > The diagnosis memory data (codes) for all devices connected are cleared.
< From the details display mode > The diagnosis memory data for devices selected is cleared. After memory clearance is completed, the mode is automatically shifted to the service check mode.
(5)Key operations for returning to the service check mode
(4)Key operations for entering the details display mode
Details display mode
This mode is available only when the service check result is "Check", "Replace" or "Old Version". For each physical address, the following information is displayed:
- Logical address for the device where some failure occurs and the diagnosis codes (indicating details of the failure), which were obtained through system check
- In addition to the above data, sub-code (indicating the device with failure), connecting confirmation no. (time stamp), and frequency of occurrence, which were obtained from diagnosis memory data

●Key operations

(1) Diagnosis IN With three times of beep sound, the mode change operation completes.	While pressing the CH1 and CH6 buttons simultaneously, press the DISC button three times.
(2) Diagnosis OUT	Keep the DISC button pressed for 3 seconds or more and turn the ACC switch OFF.
(3) Entering the Service check mode. With a beep sound, the mode change completes.	Press the TUNE UP button.
(4) Entering the Details display mode.	Press the CH2 button.
(5) Returning to the service check mode.	Press the CH3 button.
(6)Clearing the Memory data	Keep the CH5 button pressed for 3 seconds or more.
Change the display (forward)	Press the TUNE UP button.
Change the display (backward)	Press the TUNE DOWN button.

Note *1: To enter the diagnosis IN mode, use the buttons on the head unit.

●Diagnosis mode display

Service check mode

After system check completes, the check results for the devices connected to the AVC-LAN are displayed in turn in order of physical address number as follows:

◆"Physical address"
...The smallest physical address number is displayed first, whose check result will follow it.

Ex. P190
- P: Physical address is displayed.
- 19: Physical address number (radio cassette)
- 0: Physical address number

◆"Check result"
...The check result is displayed.

Ex. good Normal (OK)
ECHn Replace
CHEC Check
OLd Old Version
→ Details display mode

◆"Physical address"
...The next physical address number is displayed.

◆"Connecting confirmation no. (current)"
...The AVC-LAN time stamp is displayed.

Ex. no01
- no: The connecting confirmation number is displayed.
- 01: The current connecting confirmation number (expressed in the hexadecimal number system by using 00 to FF)

The number increases by one each time one minute passes. When 256 minutes pass, the indication returns to 00.

Details display mode (only in case of "Replace", "Check", or "Old Version")

This mode is available only when the service check result is "Replace", "Check" or "Old Version".
To select this mode, press the CH2 key.

◆"Physical address (for selected devices)"
The physical address number is displayed, whose check result details will follow it.

Ex. _P360
- P: Physical address number (CD-CH)
- 360: Physical address number

◆"Diagnosis data source"
The detailed items depend on the data source.

Ex. SyS The data was obtained from system check.

◆"Logical address"
The logical address number for the device with failure is displayed.

Ex. 1L_63
- 1: Serial number
- L: The logical address is displayed.
- 63: Logical address number (CD-CH)

◆"Diagnosis code"
The diagnosis code indicates what problem occurs.

Ex. 1d_45
- 1: The diagnosis code is displayed.
- d: Diagnosis code (abnormal EJECT)
- 45:

If there are two or more diagnosis codes, the diagnosis data display will continue.

Ex. COdE The data was obtained from diagnosis memory data.

◆"Logical address"...The same as that for the SyS data
◆"Diagnosis code"...The same as that for the SyS data
◆"Sub code"...This code indicates the device with failure.

Ex. 1P_190
- 1:
- P: The sub code is displayed.
- 190:

◆"Connecting confirmation number (when some failure occurs)"... AVC-LAN time stamp

Ex. no01
- no: The connecting confirmation number (expressed in the hexadecimal number system by using 00 to FF)
- 01: The connecting confirmation number is displayed.

◆"Frequency of occurrence"
...The frequency of failures occurred

Ex. 1c_15
- 1:
- c: The frequency of occurrence is displayed.
- 15: The frequency of occurrence expressed in the decimal number system.

Physical address allocation

① 1 / ② / ③	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	M.DISP computer	New EMV	New device with AV	New MM ECU	device with AV				Audio ECU (RSA-L)	Audio H/U	DVD-P	Rear TV	Rear Control SW	Multi-CD decoder	CD-CH commander	AMP controlled radio tuner
1																XM radio tuner
2													Europe GW ECU			SIRIUS radio tuner
4					G-BOOK							1-DIN Navigation	Consolidated inside panel	Simple LCD	Consolidated SW	RSA-M
6													Gateway ECU	Clock		RSE-M
8	EMV main	EMVIN	New 1-DIN TV		Europe navigation DISP.M/U		Rear TV with movie mode	Navigation with controls				DISPLAY with SW	FM multiplex DISPLAY	Fr controlled SW	MD-CH commander	
C							RES-L1	MONET ECU			Camera with controls		Steering SW	Navigation remote controller	Body computer	
D							RES-L2	Overseas TEL ECU		BT hands free						
E								Vehicle Information ECU								
1,3,5,7, 9-B,D,F																

Display
P①②③
Ex.P190
Physical address

① 2	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Navigation computer	ATIS	VICS	TV tuner	H/W CD-CH	H/W DVD-CH	TEL information ECU		Camera controller							
8				DTV tuner		DVD deck										
A				Mobile tuner												
1-7,9,B-F																

① 3	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Radio		Cassette	Radio cassette with no CH controller	CD-P		1DIN CD-CH		MD-P		MD-CH		DAT		DCC	
8	HD Radio															TEL ECU
1-7, 9-F																

① 4	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Equalizer				DSP				H/W AMP							
1-F																

① 5	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	GPS receiver	ATIS decoder	FM multiplex decoder	ETC	CD-CH		MD-CH		CD-ROM -CH		MD-ROM -CH		TEL information			
8			Radio wave beacon										May Day			
C			Optical beacon													
1-7,9-8,D-F																

① 6	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	A/C computer								Body computer							
1-F																

Diagnosis code table

Logical address name	Logical address	Diagnosis code	Diagnosis details
Communi-cation control	01H	00	No diagnosis
		01	Abnormal reset
		10	Abnormal +B
		11	Abnormal ACC
		12	Abnormal MUTE
		13	Fuse broken
		20	Microcomputer - abnormal
		21	ROM - abnormal
		22	RAM - abnormal
		23	Bus - abnormal
		24	F-ROM - abnormal
		25	V-RAM - abnormal
		26	Gate allay abnormal
		27	Paint controller abnormal
		28	Backup memory abnormal
		29	Voice output controller abnormal
		2A	Internal power supply abnormal
		30	Sync signal abnormal (input)
		31	Sync signal abnormal (output)
		D0	ECU not connected
		D1	Transmission abnormal
		D2	Connecting confirmation: abnormal
		D4	Connecting confirmation: no response
		D5	Registered device data missing (History of registered devices)
		D6	Master unavailable
		D7	Connecting confirmation: abnormal
		D8	Connecting confirmation: no response
		D9	Last mode abnormal
		DA	Command/order: no response
		DB	Mode status abnormal
		DC	Transmission fault
		DD	Master reset
		DE	Slave reset
		DF	Master abnormal
		E0	Registration completion acknowledgement error
		E1	Voice processor ON abnormal
		E2	ON/OFF command or parameter abnormal
		E3	Registration command transmission
		E4	Multiple frames intermit.
		FF	Diagnosis - no response

Logical address name	Logical address	Diagnosis code	Diagnosis details
Radio	60H	10	AM tuner PLL unlocked
		11	FM tuner PLL unlocked
		40	No antenna connected
		41	Antenna power supply abnormal
		42	Tuner power supply abnormal
		43	AM tuner abnormal
		44	FM tuner abnormal
		45	SW tuner abnormal
		50	Internal IC abnormal
TV tuner	40H	10	TV tuner PLL unlocked
		11	FRONTEND abnormal
		40	TV divergence shifting error
		41	TV – no reception
		42	VNR screen error
		43	No antenna connected
		44	Antenna power supply abnormal
		45	SEL +B current – small
		46	SEL +B current – large
Cassette tape	61H	10	Belt broken
		40	Mechanical failure or cassette broken
		41	EJECT failure
		42	TAPE jamming
		43	Dirty head
		44	Mech power supply abnormal
HDD Audio	69H	42	Unable to playback (DSP abnormal)
		43	Playback data underflow
VOL	74H	40	Short circuited sense

Logical address name	Logical address	Diagnosis code	Diagnosis details
Navigation GPS	58H 80H	10	Gyroscope abnormal
		11	GPS receiver abnormal
		12	RTC abnormal
		13	SS section abnormal
		14	No Time updating
		15	TCXO abnormal
		16	PLL lock abnormal
		17	HDD abnormal
		40	GPS antenna abnormal
		41	GPS antenna power supply abnormal
		42	Map disc reading abnormal
		43	SPD signal abnormal
		44	Player abnormal
		45	High temperature abnormal
FM multiplex (general) drawing	5AH	41	Antenna power supply abnormal
VICS drawing	5BH	45	Radio wave beacon - no antenna connected
FM multiplex (data)	82H	46	Optical beacon - no antenna connected
Optical beacon (data)	83H	47	No FM antenna connected
Radio wave beacon (data)	84H	4A	FM receiver abnormal
FM multiplex tuner	9AH	4B	Radio wave beacon abnormal
		4C	Optical beacon abnormal
Voice control	85H	40	Voice-control activation SW abnormal
		41	Voice-control Microphone abnormal
Extended communication	02H	40	Multi-CD-CH (optical cable) abnormal
		41	Multi-CD-CH (optical cable) not connected
		42	Multi-CD-CH (CarNet) abnormal
		43	Multi-CD-CH (CarNet) not connected
		50	HIT64 communication not connected
		51	HIT64 communication abnormal
		52	HIT64 BRQ disconnection
		53	HIT64 BRQ short-circuit
		54	HIT64 disconnection
		55	CarNet communication not connected
		56	CarNet communication abnormal
		57	CarNet periodical communication abnormal
		D0	Device not connected
		D1	Transmission abnormal
		D2	Periodical communication no response
		D4	Periodical communication abnormal
		FF	Diagnostic - no response
Information display/front monitors	32H 34H	10	Video circuit abnormal
		11	Back light abnormal (with no current)
		12	Back light abnormal (with excessive current)
		13	Panel open/close mechanical operation abnormal
		40	Front seat monitor abnormal
		41	Heater abnormal
SW	21H	10	Panel SW abnormal
SW shifting with a name	23H	11	Touch SW failure
SW shifting	24H		
Command SW	25H		

Diagnosis code table

Logical address name	Logical address	Diagnosis code	Diagnosis details
H/W CD-CH	43H	10	Mechanical abnormal
DVD-P	44H	11	Insertion ejection abnormal
DVD-CH	45H	12	Read abnormal
CD-P	62H	40	No disc
CD-CH	63H	41	Wrong disc
MD-P	64H	42	Disc cannot be read
MD-CH	65H	43	CD-ROM abnormal
		44	CD/MD/DVD abnormal
		45	EJECT abnormal
		46	Disc scratch/reverse side/ Disc dirty_scratch_reverse side
		47	High temperature detection
		48	Excessivecurrent detection
		50	Tray insertion ejection abnormal
		51	Elevation abnormal
		52	Clamp abnormal
		78	DSP abnormal
		7D	Unable to playback
		7E	No file available for playback
		7F	Copy right protection abnormal
DTV(NTSC)	46H	10	RF abnormal
DTV(RGB)	49H	11	OFDM abnormal
		12	Decoder abnormal
		40	Antenna 1 connection abnormal
		41	Antenna 2 connection abnormal
		42	B_CAS card abnormal
		43	BML version mismatch (caution)
Telephone drawing	57H	10	TEL ECU abnormal
Telephone	6DH	40	Communication line serial line abnormal
		41	Radio PWR line abnormal
		47	Bluetooth module initialization failure
		48	DCM initialization failure
AUI	A7	40	DSP abnormal
		41	Unable to playback startup BGM
		42	Internal IC abnormal
XM	C0H	11	PLL unlocked
		12	CDEC communication error
		13	SSDEC communication error
		14	SSDEC no response
		15	NVM error
		16	CAP error
		40	No antenna connected
		41	Antenna short-circuited
DVD-P dedicated to rear seat	D2H	42	Disc cannot be read
		44	CD/MD/DVD abnormal
		45	EJECT abnormal
		46	Disc scratch/reverse side/ Disc dirty_scratch_reverse side
		52	Clamp abnormal

Logical address name	Logical address	Diagnosis code	Diagnosis details
Monitoring camera	5CH	40	Camera image abnormal
		41	Steering sensor abnormal
		42	Steering sensor communication line abnormal
		43	VGRS abnormal
		44	VGRS communication line abnormal
		45	Shift information communication abnormal
		46	W/B (wheel base) information mismatch
		50	ECU abnormal
		51	IG voltage abnormal
		52	ACC voltage abnormal
		53	Back camera power supply abnormal
		56	Steering sensor +B disconnection
		57	Steering sensor signal fixing
		58	Vehicle height sensor power supply abnormal
		59	Vehicle sensor abnormal
		5A	Vehicle sensor signal (AFS) abnormal
		5B	Vehicle sensor signal (AFS) ineffective
		5C	Sensor for IPA abnormal (left)
		5D	Sensor for IPA abnormal (right)
		5E	IPA communication bus abnormal
		5F	Sensor for IPA frozen (left)
		60	Sensor for IPA frozen (right)
		61	CAN reception abnormal (from ENG, ETC, EHV)
		62	CAN reception abnormal (from VSC)
		63	CAN reception abnormal (from EPS)
		64	CAN reception abnormal (from AFS)
		65	CAN reception abnormal (from EPB)
		66	CAN reception abnormal (from PAD)
		67	CAN reception abnormal (from YGS)
		68	CAN reception abnormal (from AGN)
		69	CAN transmission abnormal (message register)
		6A	CAN transmission abnormal
		6B	ENG system abnormal HV system abnormal
		6C	ENG TS mode in process judgment
		6D	IPA→ENG communication normal/abnormal judgment
		6E	Brake system abnormal
		6F	Wheel speed sensor ineffective
		70	IPA→VSC communication abnormal
		6F	VSC TS mode in process or brake hydraulic ineffective
		71	EPS system abnormal
		72	EPS system ineffective state
		73	IPA→EPS communication abnormal
		74	VGRS system ineffective
		75	Buzzer abnormal
		76	EPB abnormal
		77	Outside air temperature sensor abnormal
		7A	Back camera constant writing not done
		7D	Left and right maximum steering angle writing not done
		7E	Vehicle height sensor zero point writing not done
		7F	G sensor zero point writing not done
		80	G sensor abnormal
		81	G sensor ineffective
		82	Outside air temperature display data not fixed

Logical address name	Logical address	Diagnosis code	Diagnosis details
ETC	87H	0A	Self diagnosis error
		0B	SAM error
		0C	On-vehicle device registration information error
		42	DSRC certification error
		43	DSRC command error
		44	Communication without card inserted
		61	RF module abnormal
		62	Antenna disconnection (history)
		71	Card error
		72	Card certification error
		81	Setup not done
		A1	Antenna disconnection (current status)
REC	9EH	40	Extension device error (DSP abnormal)
		41	Recording data overflow
MAYDAY	A0H	41	Telephone module defective
		42	Transceiver not connected
		43	White ROM/TEL no number
		44	Modem defective
		45	Auto maintenance call not established
		51	Main battery voltage low
		52	Auxiliary battery voltage low
		53	Auxiliary battery usage time over
		61	BEAN module defective
		62	Air bag life signal stopped
		63	Air bag sensor abnormal
		71	Communication error
		72	Position data no response
		73	Navigation system abnormal
		74	Position data ineffective
		91	Microcomputer internal ROM defective
		92	Microcomputer internal RAM defective
		93	External ROM defective
		94	External RAM defective
		95	EEPROM defective
		A1	Notification button disconnection
		A2	Notification button short
		B1	Fault in DSP abnormal control
		B2	RTC control fault
		B3	Fault in audio composition LSI control
		B4	PROM writing fault
		B5	SO G, A abnormal

Communi -cation control	01H	D0	Device not connected
		D1	Transmission abnormal
		D2	Periodical communication no response
		D4	Periodical communication abnormal
		FF	Diagnostic no respose
Communi -cation module	8EH	31	D information abnormal
		32	Communication unit no response
		40	No antenna connected

7.1.2 DISASSEMBLY

● Removing the Case (not shown)

1. Remove the four screws and then remove the Case.

● Removing the CD Mechanism Module (Fig.1)

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

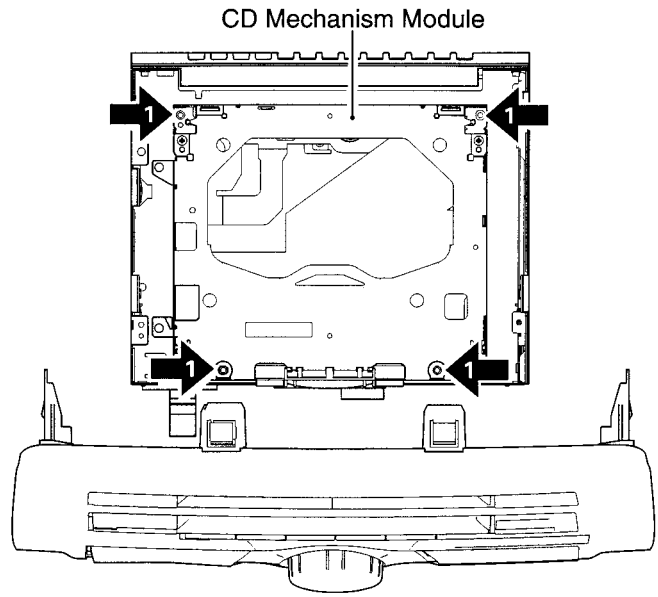


Fig.1

● Removing the Grille Assy (Fig.2)

Remove the seven screws and then remove the Grille Assy.

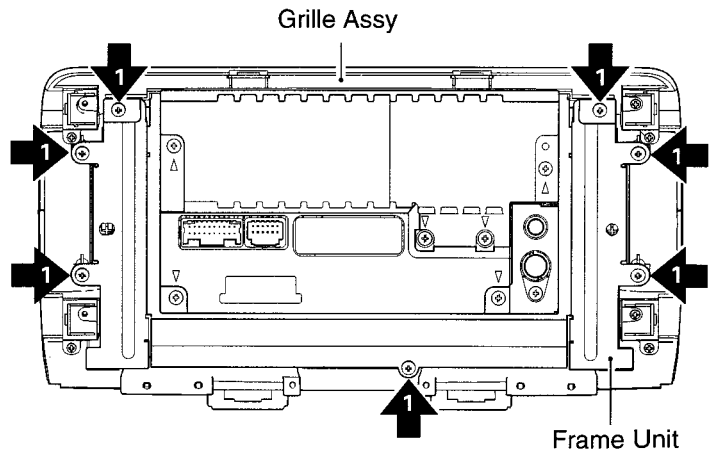


Fig.2

● Removing the Frame Unit (Fig.3)

1 Remove the five screws and then remove the Frame Unit.

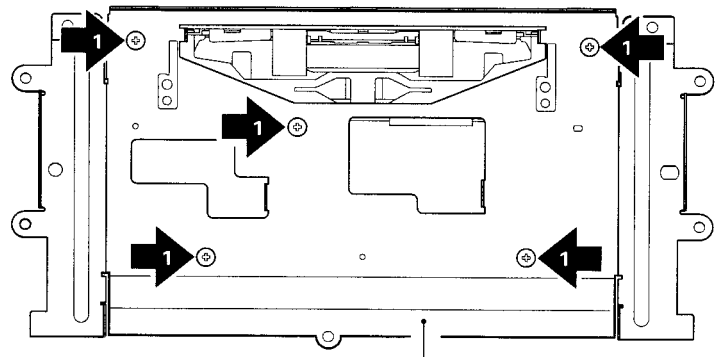


Fig.3

● Removing the Heat Sink (Fig.4)

1 Remove the two screws.

2 Remove the four screws and then remove the Heat Sink.

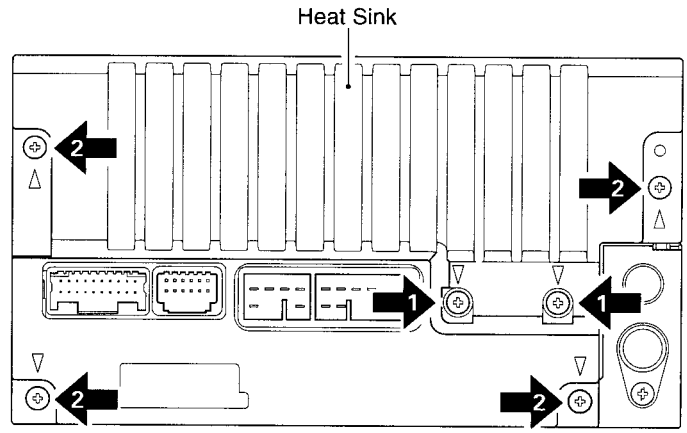


Fig.4

● Removing the Lighting Conductor (Fig.5)

1. Press the Button from the direction of the arrow to sag the entire Button and remove the hook on the button.
2. Remove the Lighting Conductor carefully not to break the Lighting Conductor.

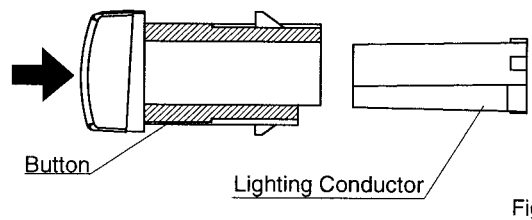


Fig.5

● Assembling the Lighting Conductor(Fig.6)

Assembling the Lighting Conductor to Button, according to indicated Fig.6.

If the Lighting Conductor is inserted incompletely when it is inserted into the Button, the feeling for pressing the Button may deteriorate.

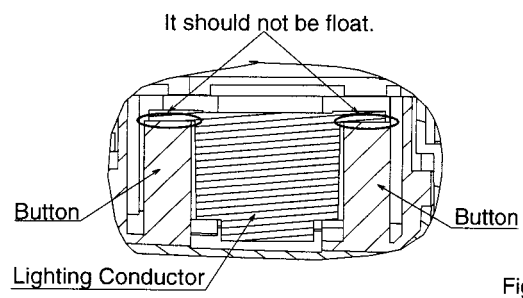


Fig.6

● Removing the Button(Fig.7)

1 Remove the four hooks and then remove the Button.

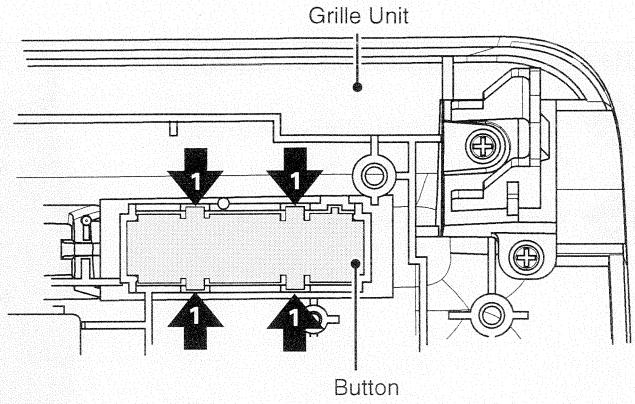


Fig.7

● Removing the Side Panel (Fig.8)

1 Remove the five screws and then remove the Side Panel.

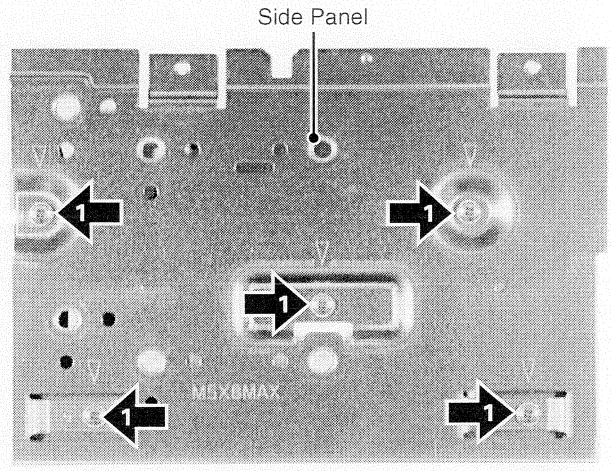


Fig.8

● Removing the Chassis Unit (Fig.9)

1 Remove the five screws and then remove the Cassis Unit.

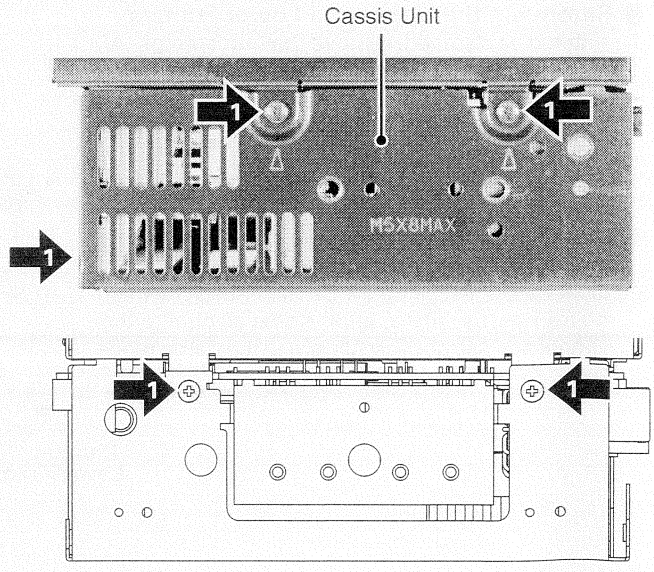


Fig.9

● Removing the Tuner Amp Assy (Fig.10)

1 Straighten the tabs at three locations indicated.

2 Remove the two screws and then remove the Tuner Amp Assy.

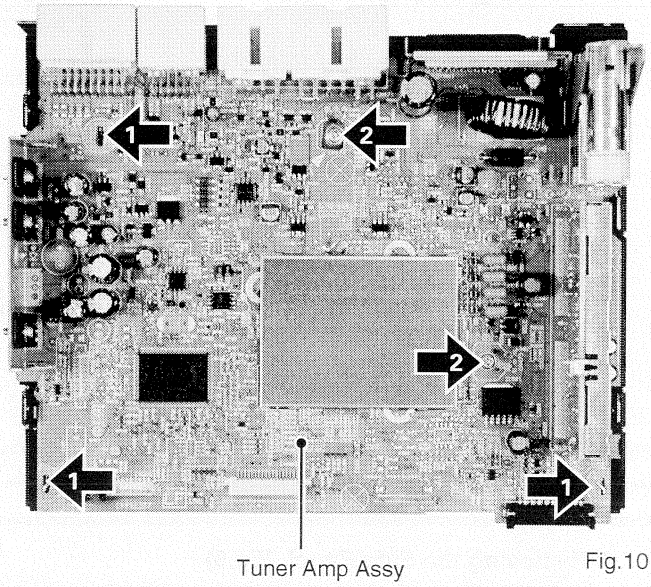
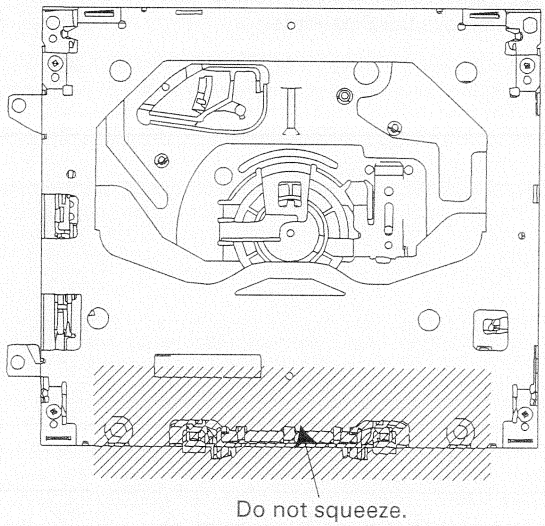


Fig.10

● How to hold the Mechanism Unit

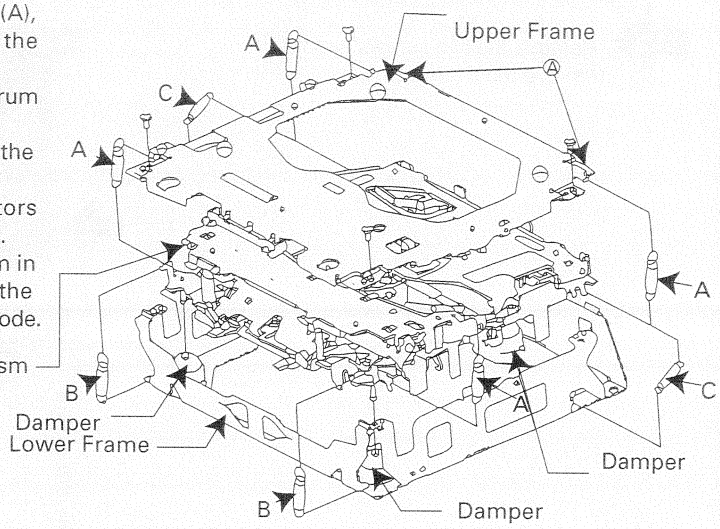
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

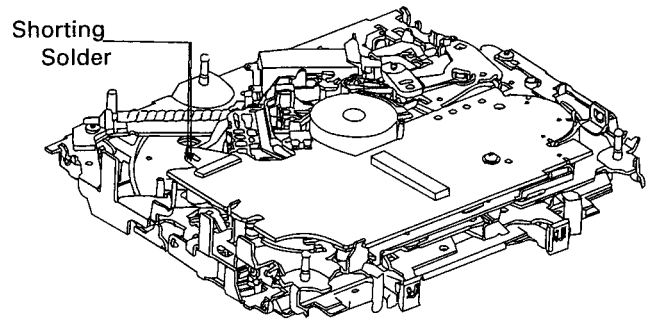
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.

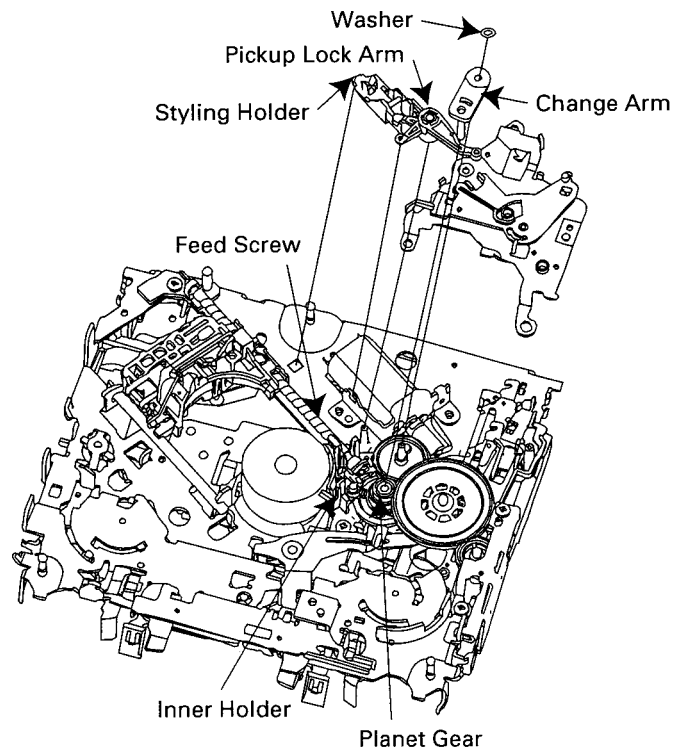


● Removing the Pickup Unit

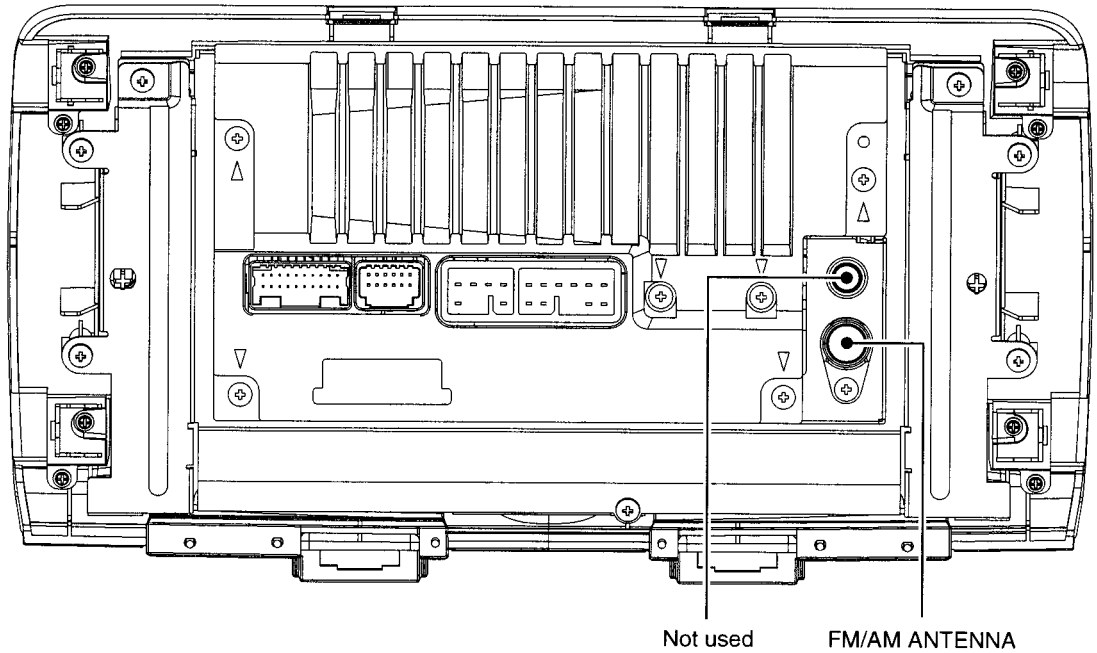
1. Apply shorting solder to the Pickup flexible cable. Disconnect the cable.
2. Set the mechanism to the clamp mode.
3. Remove the lead wires from the inner holder.
4. Remove the washer, styling holder, change arm, and pickup lock arm.
5. While releasing from the hook of the inner holder, lift the end of the feed screw.

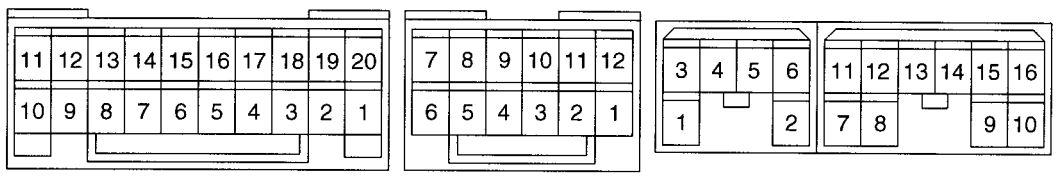
Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.





7.1.3 CONNECTOR FUNCTION DESCRIPTION





1. TX-
2. TX+
3. SW2
4. SW1
5. SWG
6. NC
7. NC
8. SPD
9. NC
10. NC
11. NC
12. NC
13. NC
14. NC
15. ARI
16. ASGN
17. ALI
18. NC
19. AUXI
20. NC

1. MUTE
2. CDL-
3. CDL+
4. CDR-
5. CDR+
6. CSLD
7. GND
8. NC
9. TXM+
10. TXM-
11. ACC
12. +B

1. RR+
2. RL+
3. RR-
4. NC
5. NC
6. RL-
7. FR+
8. FL+
9. ACC
10. B+
11. FR-
12. FL-
13. GND
14. ANT
15. AMP
16. ILL+

7.2 PARTS

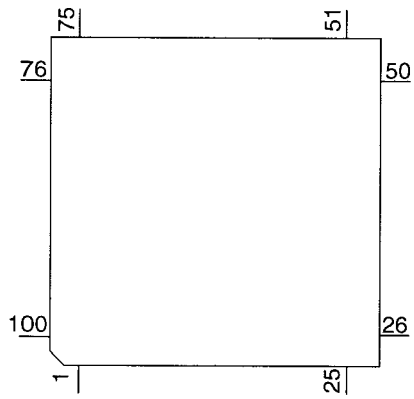
7.2.1 IC

● Pin Functions(PE5528A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	AVREF0	I		Reference voltage input for A/D converter
2	AVSS			A power supply GND
3	EMP	O	C	RFOK output / ECC_ERR / Evaluation pin for shock-proof(EMP)
4	CLAMP	I		CLAMP SW sense input
5	EVDD			E power supply Positive power supply
6, 7	NC			Not used
8	IC/FLMD0			IC : VSS direct connection / VPP : Pull-down
9	VDD			Positive power supply(5 V)
10	REGC			Connected to the capacity stabilizing output of the regulator(About 4.7 µF)
11	VSS			GND
12	X1	I		Oscillator connection for mainclock
13	X2	O		Oscillator connection for mainclock
14	$\overline{\text{RESET}}$	I		System reset input
15	XT1	I		Connected to the oscillator for subclock (connected to VSS via the resistor)
16	XT2	O		Connected to the oscillator for subclock(Open)
17	PULLDOWN	I		Connected to EVDD or EVSS via the resistor
18	$\overline{\text{EJSW}}$	I	C	Eject key input
19	$\overline{\text{XINT}}$	I		CD LSI interruption signal input
20	NC			Not used
21	$\overline{\text{BRST}}$	I		P-Bus reset input
22	BSI	I		P-Bus serial data input
23	BSO	O	N	P-Bus serial data output
24	$\overline{\text{BSCK}}$	I/O	/C	P-Bus serial clock input/output
25	FTXD	O	C	For flash rewriting output(transmitted signal)
26	FRXD	I		For flash rewriting input(received signal)
27	BRXEN	O	C	It is possible to receive P-Bus output
28	$\overline{\text{BSRQ}}$	I/O	/C	P-Bus service request demand input/output
29	$\overline{\text{DSPOK}}$	O	C	DSP microcomputer initialize OK output
30	DSCSNS	I	C	Disc state sense input
31	8EJ	I	C	Input of detection of 8 cm disc ejection
32	12EJ	I	C	Input of detection of 12 cm disc ejection
33	EVSS			E power supply GND
34	EVDD			E power supply Positive power supply
35-37	RAM0-2	O	C	Shock-proof memory buffer volume output 0-2
38	EMPH	O		Emphasis information output
39-42	NC			Not used
43	$\overline{\text{ADENA}}$	O		A/D reference voltage supply control output
44	DSPMUTE	O	C	DOUT mute output
45	$\overline{\text{CD3VON}}$	O		CD +3.3 V power supply control output
46	CD3VON	O	C	CD +3.3 V power supply control output
47	CONT	O	C	Servo driver power supply control output
48	$\overline{\text{XRST}}$	O	C	CD LSI reset control output
49	VDCONT	O	C	VD power supply control output
50	ROMDATA	I/O	/C	E2PROM data input/output
51	ROMCS	O	C	E2PROM chip selection output
52	ROMCK	O	C	E2PROM clock output
53	LOEJ	O	C	The direction change output of LOAD/EJECT
54	CLCONT	O	C	Driver input change output
55	CDMUTE	O	C	CD mute control output
56-58	INT	O		For changer(Edge interrupt)
59	$\overline{\text{XCS}}$	O	C	CD LSI chip selection output
60	NC			Not used
61	$\overline{\text{XWAIT}}$	I		CD LSI write control signal input
62	CLKOUT	O	C	Internal system clock output(Open)
63	LOCK	I		Spindle lock input
64	NC			Not used
65	$\overline{\text{XWRITE}}$	O	C	CD LSI write control signal output
66	NC			Not used
67	$\overline{\text{XREAD}}$	O	C	CD LSI read control signal output

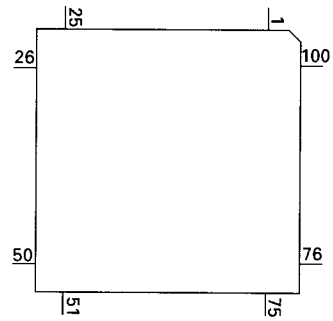
Pin No.	Pin Name	I/O	Format	Function and Operation
68	XASTB	O	C	CD LSI address strobe output
69	BVSS			B power supply GND
70	BVDD			B power supply Positive power supply(3.3 V)
71-86	AD0-15	I/O	/C	Address/data Bus 0-15 input/output
87	FMODE	I	C	For impressed FLMD0_3.3 V
88	FLRQ	O	C	For transition rewriting mode
89, 90	NC			Not used
91-93	A/D			For changer(A/D)
94	$\overline{CSES}$	O		Flap close sense output
95	TYPE_A/D	I		CD-DA analog/digital output change setup input
96	$\overline{TESTIN}$	I		Chip check test program starting input
97	HOME	I		Home SW sense input
98	TEMP	I		Temperature information sense input
99	VDSENS	I		VD power supply short sense input
100	NC			Not used

PE5528A



Format	Meaning
C	CMOS
N	N ch open drain

UPD16432B-027



● Pin Functions(UPD16432B-027)

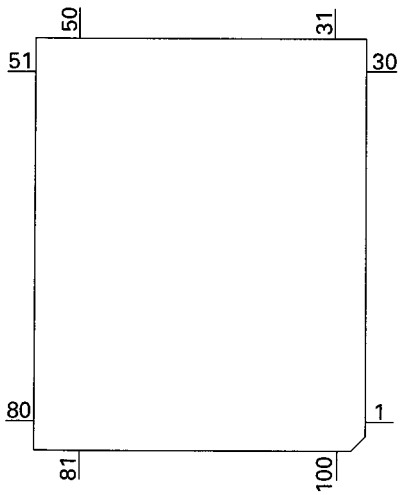
Pin No.	Pin Name	I/O	Function and Operation
1-4	LED1-4	O	LED output
5	VSS		GND
6-10	VLC5-1		Dot matrix LCD drive power supply
11	VLCD		LCD drive power supply
12	VDD		Power supply
13	SYNC	I/O	Synchronization signal input/output
14	$\overline{LCDOFF}$	I	LCD off input
15	$\overline{RESET}$	I	Reset input
16	KEYREQ	O	Key request output
17	SCK	I	Data shift clock input
18	DATA	I/O	Data input/output
19	$\overline{STB}$	I	Strobe input
20	OSCIN		Connect to oscillator resistor
21	OSCOUT		Connect to oscillator resistor
22-25	KEY1-4	I	Key data input
26-90	SEG1-65	O	Segment output
91-100	COM0-9	O	Common output

● Pin Function (PM2013A)

Pin No.	Pin Name	I/O	Function and Operation
1	XI	I	Crystal oscillator connection or clock input
2	XO	O	Crystal oscillator connection
3	VDX		Crystal oscillator power supply
4	GNDA1		DAC1GND
5	AOUT1	O	DAC1 volume output
6	DACO1	O	DAC1 output
7	VLI1	I	DAC1 volume input
8	VDD12		DAC1, DAC2 power supply
9	VLI2	I	DAC2 volume input
10	DACO2	O	DAC2 output
11	AOUT2	O	DAC2 volume output
12, 13	GNDA2, 3		DAC2, 3GND
14	AOUT3	O	DAC3 volume output
15	DACO3	O	DAC3 output
16	VLI3	I	DAC3 volume input
17	VREF		DAC operation amp reference potential connection pin
18	VDD34		DAC3, DAC4 power supply
19	VLI4	I	DAC4 volume input
20	DACO4	O	DAC4 output
21	AOUT4	O	DAC4 volume output
22, 23	GNDA4, 5		DAC4, 5GND
24	AOUT5	O	DAC5 volume output
25	DACO5	O	DAC5 output
26	VLI5	I	DAC5 volume input
27	VDD56		DAC5, DAC6 power supply
28	VLI6	I	DAC6 volume input
29	DACO6	O	DAC6 output
30	AOUT6	O	DAC6 volume output
31	GNDA6		DAC6GND
32	GND		Digital section GND
33-36	TEST0-3	I	Test setting 0-3
37	VDD		Digital section VDD
38-41	TP0-3	O	Test port 0-3
42	CKI0	I	DAC clock input 0
43	TP4	O	Test port 4
44	CKI1	I	DAC clock input 1
45	TP5	O	Test port 5
46	CKO0	O	General-purpose clock output 0
47	TP6	O	Test port 6
48	CKO1	O	General-purpose clock output 1
49	VDD		Digital section VDD
50	CKO2	O	Clock output 2
51, 52	ELRO0, 1	I	LRCK input for DOUT0, 1
53, 54	EBCO0, 1	I	BCK input for DOUT0, 1
55, 56	DOUT0, 1	O	Digital serial output 0, 1
57	GND		Digital section GND
58-60	DIN0-2	I	Digital serial input 0-2
61, 62	EBCI0, 1	I	BCK input for DIN0, 1
63, 64	ELRI0, 1	I	LRCK input for DIN0, 1
65	GND		Digital section GND
66	I2CS	I	Microcomputer I/F I2C select
67	$\overline{CS}$	I	Microcomputer I/F chip select
68	IFCK	I	Microcomputer I/F communication clock input
69	IFDI	I	Microcomputer I/F data input
70	IFDO	O	Microcomputer I/F data output
71	$\overline{ACK}$	O	Microcomputer I/F acknowledge output
72	IFOK	O	Microcomputer I/F condition monitor output
73	$\overline{ERR}$	O	Overrun monitor output
74	BT	I	Boot setting

Pin No.	Pin Name	I/O	Function and Operation
75	$\overline{RST}$	I	Reset
76	VDD		Digital section VDD
77	VDAM		ADC microphone input power supply
78	VARM		ADC microphone input operation amp reference potential
79	MIN	I	ADC microphone input
80	GNDM		ADC microphone input GND
81-86	LIN-1-6	I	ADC Lch input 1-6
87-92	RIN-1-6	I	ADC Rch input 1-6
93	GNDAL		ADC Lch input GND
94	OUTL	O	ADC Lch selector output
95	VRAL		ADC Lch operation amp reference potential
96	VDA		ADC input power supply
97	VRAR		ADC Rch operation amp reference potential
98	OUTR	O	ADC Rch selector output
99	GNDAR		ADC Rch input GND
100	GNDX		Crystal oscillator section GND

PM2013A



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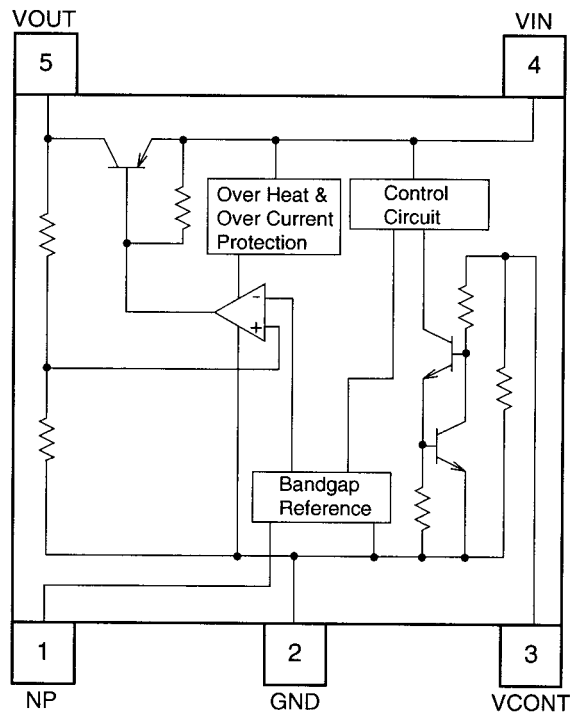

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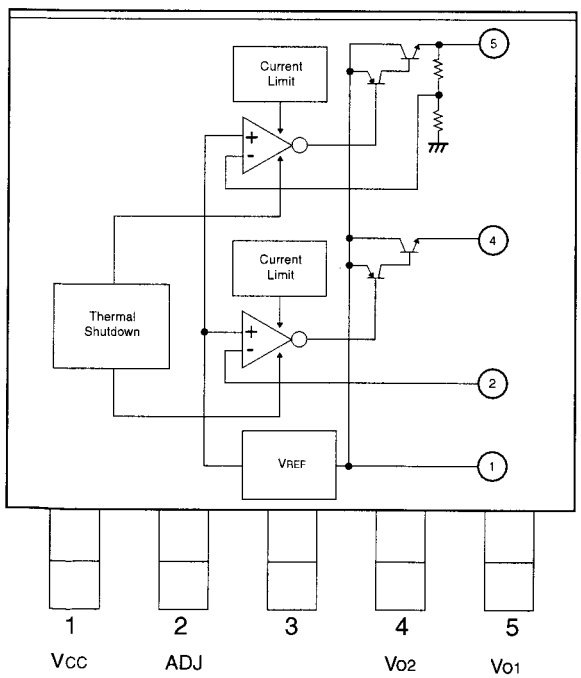
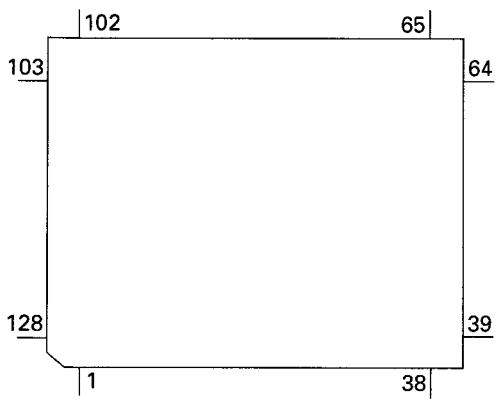


● Pin Functions(PEG278A)

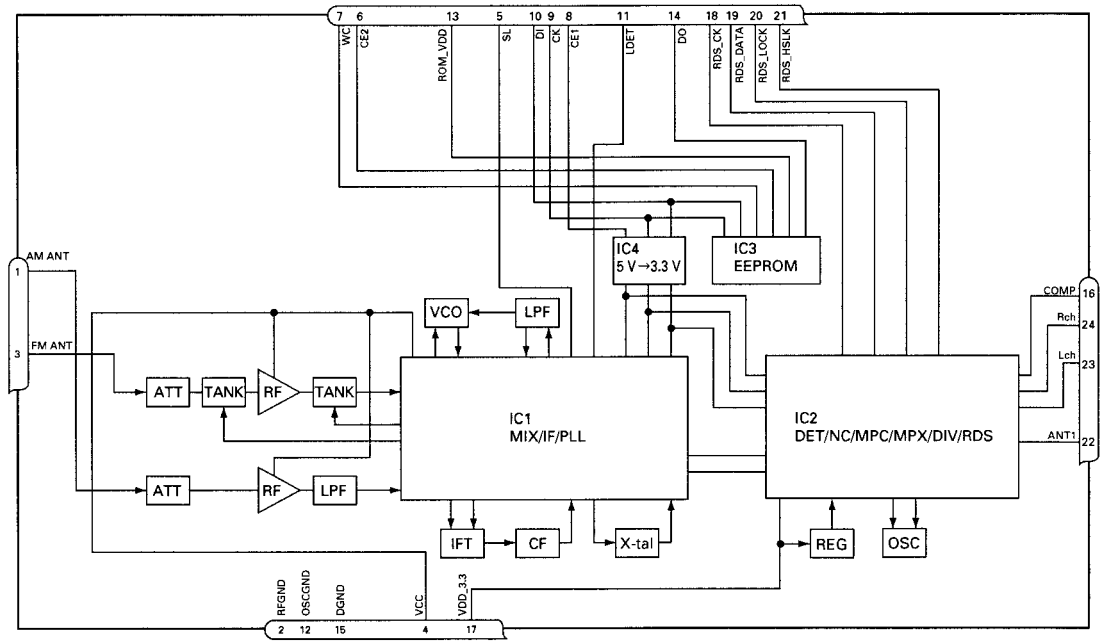
Pin No.	Pin Name	I/O	Function and Operation
1	VREF	I	A/D reference voltage input
2	AVCC		AVCC
3	PDI	I	PLL : Data input
4	PDO	O	PLL : Data output
5	$\overline{PCK}$	O	PLL : Data clock output
6	$\overline{PCE2}$	O	EEPROM : Chip enable output
7	PCE1	O	PLL : Chip enable output
8	LDATAO	O	LCD Driver : Data output
9	LDATAI	I	LCD Driver : Data input
10	LCK	O	LCD Driver : Clock output
11	ENC1P	I	Rotaly Encoder 1+ : input
12	ENC1M	I	Rotaly Encoder 1- : input
13	BYTE		GND
14	CNVSS		GND
15	ENC2P	I	Rotaly Encoder 2+ : input
16	ENC2M	I	Rotaly Encoder 2- : input
17	$\overline{RESET}$	I	Reset input
18	XOUT	O	Crystal oscillating element connection output
19	VSS		GND
20	XIN	I	Crystal oscillating element connection input
21	VCC		Power supply
22	$\overline{NMI}$		VDD connection
23	$\overline{RDSCK}$	I	RDS clock input
24	$\overline{LDET}$	I	PLL : Lock sense input
25	LOFF	O	LCD Driver : Display off output
26	RX2	I	AVC-LAN : Data input
27	IPPW	O	AVC-LAN : Power supply control output
28	$\overline{LRST}$	O	LCD Driver : Reset output
29	PWRBL	O	Backlight control output
30	LCE	O	LCD Driver : Chip enable output
31	PWMILL	O	Illumination control output
32	$\overline{BSRQ}$	I	P-BUS : Request input
33	BEEP	O	Beep tone output
34	RX1	I	AVC-LAN : Data input
35	TX	O	AVC-LAN : Data output
36	BSO	O	P-BUS : Data output
37	VCC		Power supply
38	BSI	I	P-BUS : Data input
39	VSS		GND
40	BSCK	O	P-BUS : Data clock output
41	$\overline{BRXEN}$	I/O	P-BUS : Reception enable input/output
42-45	NC		Not used
46	SPEED	I	Pulse input from speed sensor of car
47-60	NC		Not used
61	NC	O	Main composite signal ON output
62-66	NC		Not used
67	AMPW	O	TUNER : AM power supply control output
68	FMPW	O	TUNER : FM power supply control output
69	NC		Not used
70	ROMDATA	O	ROM data output
71	ROMCK	O	ROM clock output
72	ROMCS	O	ROM chip select output
73	WC	I/O	Test mode input / Tuner write control output
74	ACCON	O	BSENS power supply control output
75	NC		Not used
76	SYSMUTE1	O	Speaker output mute output
77	$\overline{BRST}$	O	P-BUS : Reset output
78	PINCODE	O	Indicator output
79	LANMUTE	O	AVC-LAN mute output
80	ADIM	I	ADIM data input
81	SYSPW	O	System power supply control output
82	SWVDD	O	SWVDD control output

Pin No.	Pin Name	I/O	Function and Operation
83	TEST	I	Test mode program input
84	NC		Not used
85	VCC		Power supply
86	NC		Not used
87	VSS		GND
88	ANTBSENS	O	ANT +B control output
89-94	NC		Not used
95	$\overline{\text{ISEN}}$	I	Illumination sense input
96	NC		Not used
97	$\overline{\text{ASEN}}$	I	ACC power sense input
98	$\overline{\text{BSEN}}$	I	Back up power sense input
99	TELMUTE	I	TEL mute input
100-103	NC		Not used
104	RDSDATA	I	RDS data input
105	RDSLK	I	RDS lock signal input
106	RDSHSLK	I	RDS high speed lock signal input
107	$\overline{\text{DSP1RST}}$	O	DSP1 : Reset output
108	DSP1ERR	I	DSP1 : Error input
109	DSP1OK	I	DSP1 : Input for frag to confirm operation
110	DSP1ACK	I	DSP1 : Acknowledge input
111	$\overline{\text{DSP1CS}}$	I	DSP1 : Chip select input
112	DSP1DI	I	DSP1 : Data input
113	DSP1DO	O	DSP1 : Data output
114	DSP1CK	O	DSP1 : Clock output
115-120	NC		Not used
121	STSW1	I	Steering switch 1 input
122	STSW2	I	Steering switch 2 input
123	ILL-	I	Illumination minus input
124,125	NC		Not used
126	AUXI	I	Mini Jack sense input
127	AVSS		Analog power GND
128	SL	I	TUNER : Signal level input

PEG278A



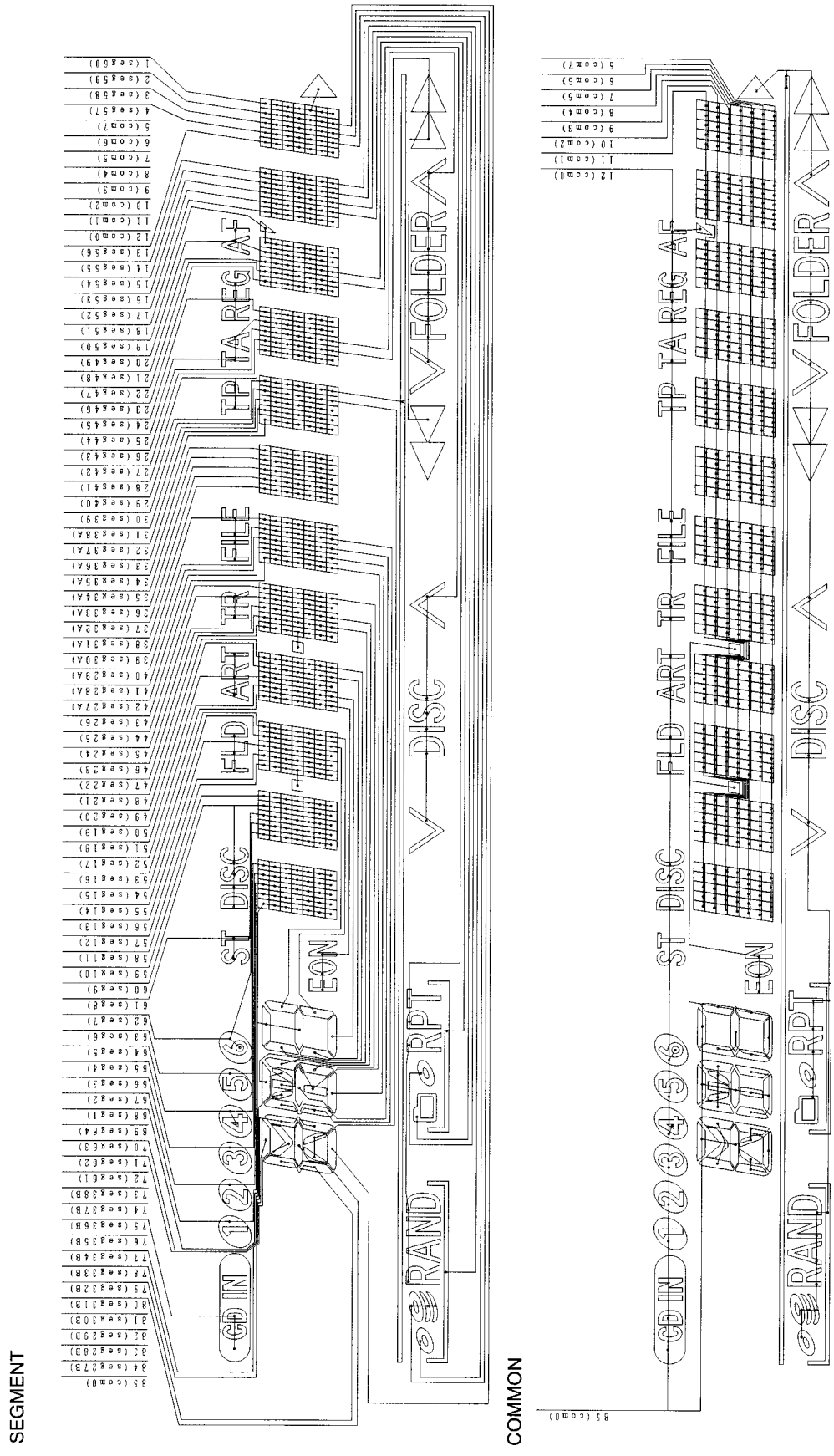
● FM/AM Tuner Unit



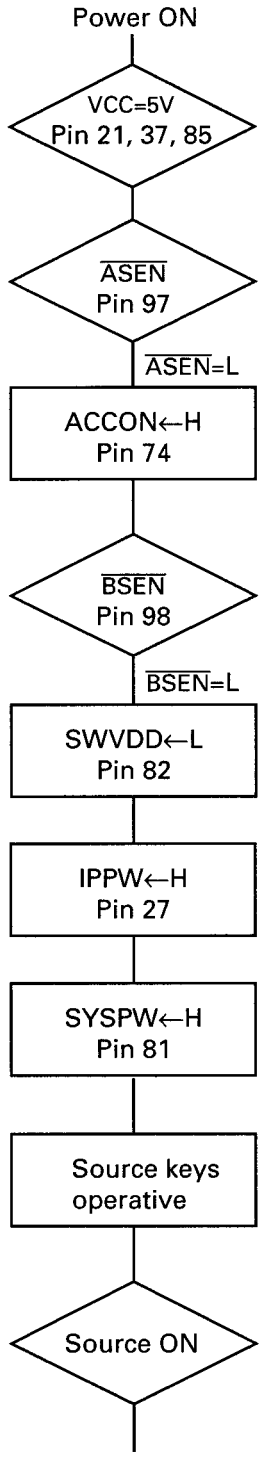
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 33 μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75 Ω Surge absorber is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4 V ± 0.3 V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock data input
10	DI	I	data in	Data input
11	LDET	O	lock detector	"Low" active
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	COMP	O	composite output	FM composite signal output.
17	VDD_3.3		power supply	The power supply for digital block. 3.3 V ± 0.2 V
18	RDS_CK	O	RDS clock	Output of RDS clock(2.5 V)
19	RDS_DATA	O	RDS data	Output of RDS data(2.5 V)
20	RDS_LOCK	O	RDS lock	Output unit "High" active(2.5 V) (RDS_LOCK turns over by the external transistor. "Low" active)
21	RDS_HSLK	O	RDS high speed lock	Output unit "High" active(2.5 V)(RDS_HSLK turns over by the external transistor. "Low" active)
22	ANT1		diversity antenna control	Antenna switch control signal output. "High" : MAIN, "Low" : SUB
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.2.2 DISPLAY

● **LCD(CAW1943)**



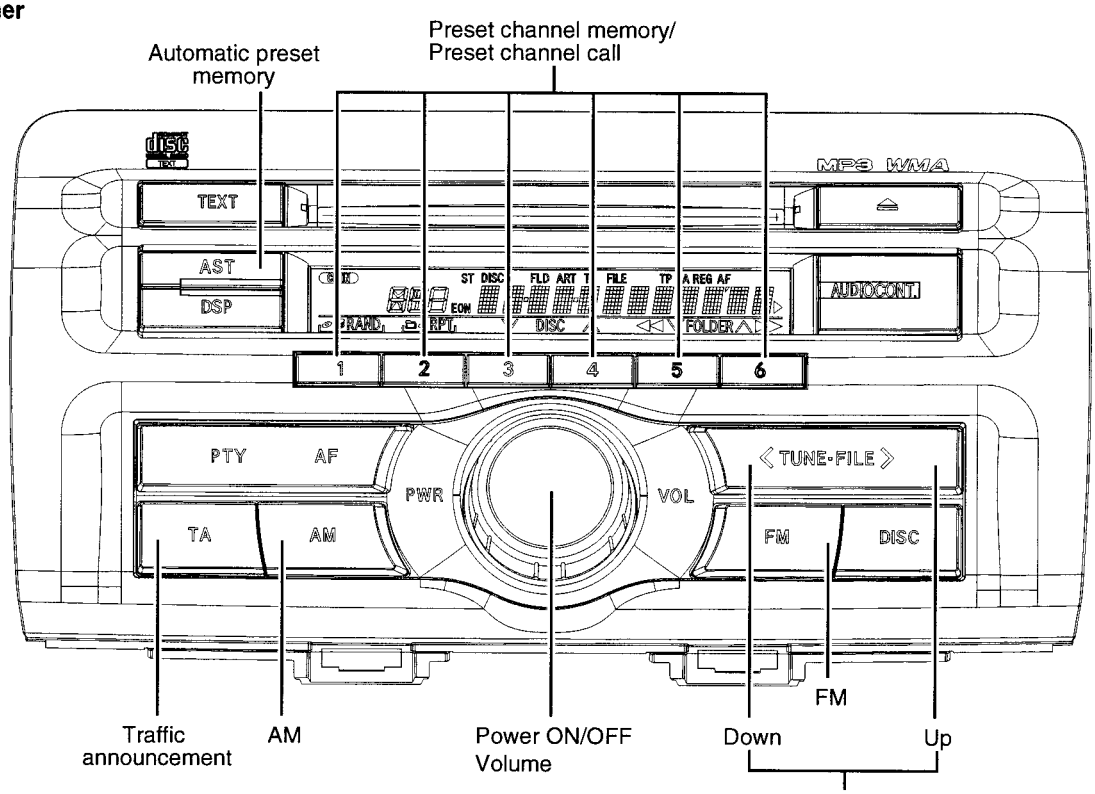
7.3 OPERATIONAL FLOW CHART



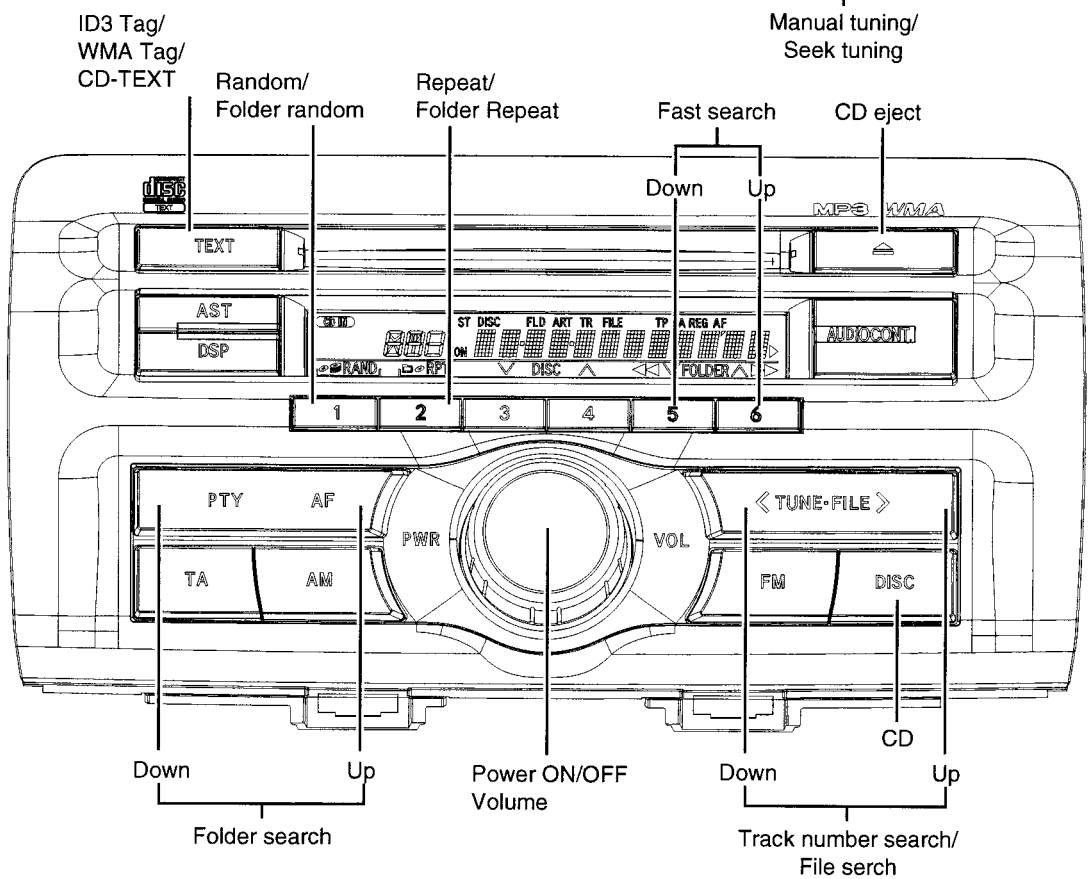
Completes power-on operation.
(After that, proceed to each source operation)

8. OPERATIONS

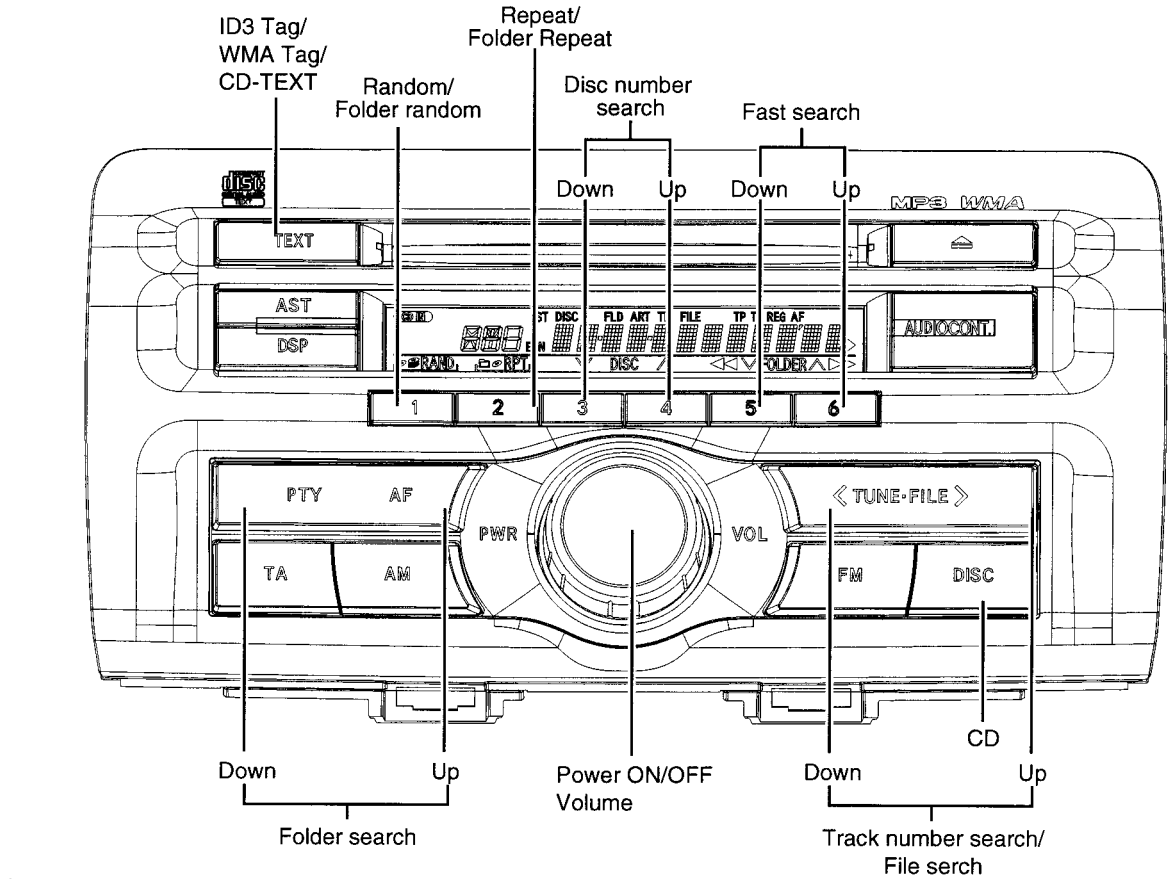
● Tuner



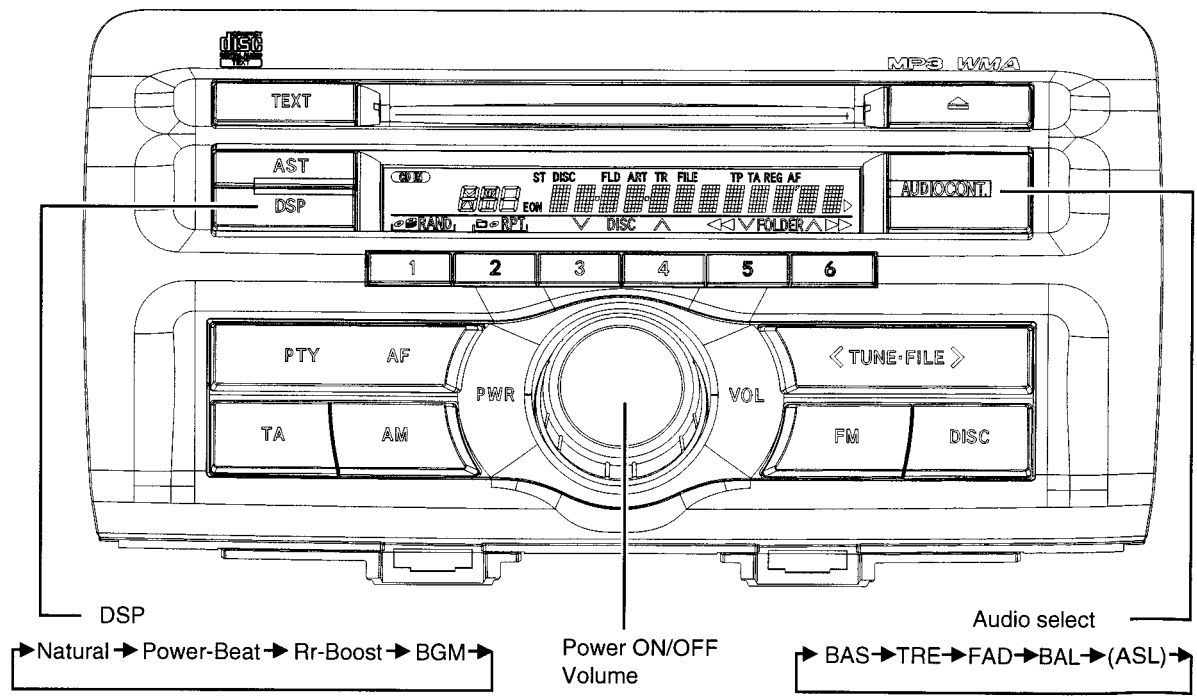
● CD



● Multi-CD



● Audio



● Jigs List

Name	Jig No.	Remarks
Test Disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)
Power Supply Cable	GGF-146	Checking the operation

● Grease List

Name	Remarks
GEM1024	CD mechanism module
GEM1045	CD mechanism module
GEM1035	CD mechanism module

● CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008